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LECTURES

ON THE

THEORY AND PRACTICE OF MIDWIFERY

DELIVERED AT GUY'S HOSPITAL BY

DR. BLUNDELL.

LECTURE VI.

Of the various Modes in which the Child is transmitted through the Pelvis.

THE fœtus, Gentlemen, may pass the pelvis, or attempt a passage, under *four* different presentations, and four different presentations only, and the presentations I mean are those of the *head*, of the *feet*, of the *breech*, and those in which the child is lying across the pelvis. Under one or other of those general presentations, cephalic, natal, crural, or transverse, the passage of the pelvis must be accomplished or attempted.

Of all the presentations, the cephalic are decidedly the most common; and of the parts of the head, that which presents most frequently, and which forms the presentation in all ordinary labours, is the *vertex*, or that part of the summit around which the hair is curvilinearly ranged.

Vertex presentation.—When the vertex presents, as in an ordinary labour, we find, in the commencement of parturition, that the face is lying upon the sacro-iliac synchondrosis, the occiput on the acetabulum, and the chin upon the chest; and in this position the head descends with facility, as here demonstrated. In consequence of the face lying in this manner towards the one, and the occiput towards the other side of the pelvis, the long length of the head stretching from before backward is in correspondence with the long diameter of the brim, which reaches, as already demonstrated, from side to side, the two diameters, as you perceive, here agreeing with each other. If the face lie forward, in the way here illustrated, the head will not descend with equal facility, the long diameter of the head being opposed to the short diameter of the brim. From the natural situation, therefore, evident advantage is derived, the face lying towards the sacro-iliac synchondrosis, and the occiput being opposed to the acetabulum, the long diameters correspond.

In a labour that is natural too, the vertex presenting, we further find the chin in this manner depressed upon the chest, so that the two parts are brought into contact with each other: observe the model. The chin thus placed upon the thorax, the occiput descends, and you bring the shortest of the three long diameters, or axes of the head,—that I mean which is stretching between the upper part of the forehead and lower part of the occiput,—to bear upon the long diameter of the brim; a great deal of clear space, into which, as you may see, the whole mass of my fingers may be passed, being retained in this manner on the side of the pelvis. If the chin be separated from the chest, so that the longest of the three diameters of the head, namely, the stretching between the chin and the vertex, is made to correspond with the long diameter of the superior aperture, a larger space is occupied in consequence, and (excuse the levity) the brim becomes brim full. Thus we find, on examination, that in this natural position of the head, the cranium lies in fact in that exact situation which, of all others, is the most favourable for transmission through the brim, the chin being brought upon the chest, the face upon the synchondrosis, and the occiput upon the acetabulum; under these favourable positions plenty of room is obtained, and the head of the fœtus readily descends.

When the head reaches the outlet of the pelvis, we then find it emerging under the following situation: the vertex presenting, the occiput lies out under the arch of the pubes, the face, and part of the os-coccygis and forehead, are deposited in the hollow of the sacrum, and the sagittal suture stretches along the *perinæum*, or that portion of the softer parts which is interposed between the *genital fissure* and the *anus*, and of which I shall hereafter treat. Now if you examine this position of the head at the

outlet, in comparison with those properties of the inferior aperture, which I formerly explained, you will see that nature, in an ordinary labour, places the head in the position the most favourable for passage. The face and forehead lying in the hollow of the sacrum, the occiput lying out under the arch of the pubes, the long diameter of the head accords with the long diameter of the outlet, for the long diameter of the outlet lies between the pubes and the coccyx, whence arises a great facility to the passage of the head. If the face had been to the one and the occiput to the other side, difficulty must have arisen, for the long length of the head would have been opposed to the shorter length of the outlet, and the passage would have been thereby obstructed; it is clear, therefore, that when the head passes into the pelvis under the vertex presentation, a turn is accomplished, pre-eminently called the *turn*; and by this the occiput, in the first part of labour on the side of the pelvis, is carried forward under the arch of the pubes. Suddenly the occiput may start forward into this position, but more frequently it turns gradually, so that unless you are continually examining, you may scarcely know when the evolution is effected.

Under presentation of the vertex, the face of the fœtus may lie on the symphysis pubis all through the labour, and in consequence of this unfavourable position, no small danger may arise; the mother herself not unfrequently suffers, and the fœtus often dies. When the vertex presenting the face lies forward in this manner throughout the labour, in the passage of the superior aperture, considerable difficulty may be occasioned, the long diameter of the head being opposed to the short diameter of the brim. If the head be large, or the pelvis small, it cannot be transmitted through the aperture; and even when the head is smaller and the pelvis more capacious, the chin of the child lying on the chest, so that, of the three long diameters, the shortest is opposed to the short diameter of the brim, it is not without strong uterine effort and many pains, that the descent is effected, and the bladder gut and vagina are all of them liable to suffer from the severe pressure to which they are subjected; besides the face lying forward, you may perceive that no part of the head lies out under the arch of the pubes, as in ordinary labour, nor does the occiput lodge itself in the hollow of the sacrum, without that loss of room which in this apparatus is so well demonstrated. You may observe, moreover, when the head emerges, that on the rectum and perineum, the occiput must bear most forcibly, and in those cases, especially in which instruments are unskilfully employed, contusions, lacerations, and sloughings, will not improbably be produced. To all which we may add, that, occasioning so much compression, the head is itself forcibly compressed; the fœtus not uncommonly perishing in consequence of cerebral contusion.

Important as this case is, I shall demonstrate the different parts of it again in the way of brief recapitulation. The vertex presenting, and the face lying forward throughout the labour, there is difficulty at the brim, because the greatest length of the head does not correspond with the greatest length of the aperture; the head, however, being frequently forced down by the strength of the pains, but not without much suffering from resistance and pressure. Further, the vertex presenting and the face lying forward, there is great difficulty at the outlet, arising from three causes, first, because no part of the head lies under the arch of the pubes; secondly, because the occiput does not fit in nor commodiously adapt itself to the hollow of the sacrum; and thirdly, and very principally, because the back part of the head or occiput is making so much pressure on the perineum and rectum, that it occasions bruising, laceration, and sloughing, with much resistance of those parts.

It seems, then, that where the face throughout the labour is lying forward on the symphysis, many difficulties are occasioned; what is it then, that the accoucheur can do in order to diminish, surmount, or remove them? What is there that he can with prudence do, and without committing the unpardonable sin of midwifery, the sin—I mean, of those obstetric reprobates, the meddlesome and the pragmatic? That turning the child is universally unjustifiable when the case is indisputable, the dexterity great, and the circumstances are conducive, I will not venture to assert. And when the softer parts are lax, and the pelvis is capacious, and our dexterity from long practice such that we can introduce the hand into the cavity of the uterus, and lay hold of the child's legs, and bring it away with facility, by the operation of turning: I will not say that under such circumstances, we may not now and then be justified in making the attempt. By this operation we clear ourselves of the malposition of the head, the vertex becoming changed into the crural presentation. Decidedly, however, and in the strongest language I can use, I would reprobate this turning as a general practice in these cases, because you will be contusing the vagina, if you are needlessly pushing the hand up the uterus, because you will be tearing the womb, pulling the head from the body—meddling. Remember also, that until you acquire the dexterous use of the fingers, you must frequently be deceived when endeavouring to ascertain the situation. Often

you might fancy the child's face is forward, when it is not; often, if you were to make a practice of turning, you would perform the operation without need, and when, perhaps, the child's head was lying in the position the most favourable for parturition.

If the softer parts are lax, the pelvis large, and the fingers dexterous, I will not assert that you may not be justified in doing what I myself sometimes have done, I mean rectifying position. Finding that the face of the child is forward, that the head is above the brim, that the passages are relaxed and capacious, you may put your hand into the uterus, you may lay hold of the head, as you would lay hold of any other body; and you may gently place the head with the face in the side of the pelvis; all this, I say, may be done, may be commended, perhaps, sometimes,—but beware, lest you rashly contuse or lacerate the softer parts. So, again, if it be clearly ascertained that the face of the fœtus is lying on the symphysis, when experience and practice are not wanting, if you have a pair of forceps, or a lever, you may endeavour to rectify the position with these instruments, proceeding, however, as I here show you, cautiously and with reflection, remembering that you are operating upon the softer sex; then having secured the cranium by means of one or other of these instruments, when the head is at the brim, you may lay the face on the side of the pelvis, and when it reaches the outlet, you may deposit it in the sacrum behind.

There is yet another practice proposed by Dr. Clark, and which seems to be excellently adapted to cases of this kind, recommending itself to our attention by its ease and safety. When the face lies forward, and the head is descended into the cavity of the pelvis, you may lay two fingers on the cheek, and pressing gently when the womb is in action, you may gradually transfer the face from the front to the back of the pelvis, gaining a little progress with every pain, and this, too, without injury to the delicate structure of the female, unless turbulence and violence unfit you for the duties of an accoucheur. So that to recapitulate in those cases in which the vertex presenting the face is on the symphysis, we may sometimes, though very rarely, attempt to turn the fœtus by the feet, or sometimes when the head is above the brim, we may effect the rectification by the hand, forceps, or lever, as demonstrated; or sometimes, lastly, and most securely, by laying the two fingers on the cheek, and gradually with every pain bringing the face towards the side, and ultimately into the hollow of the sacrum, a rectification of the unfavourable situation may not unfrequently be accomplished.

But what is to be done, should neither the rectification of the situation of the head, nor the turning of the child be deemed the proper practice? You cannot rectify perhaps: to turn the fœtus is impossible.—Why, in cases like these, Gentlemen, the general rule should be your guide: first, give a fair trial to the natural efforts, which the wise accoucheur who has seen much, and thought much, never hastily distrusts. If, therefore, no dangerous symptoms manifest themselves, let the womb act powerfully for four-and-twenty hours after the discharge of the liquor amnii, and notwithstanding its unfavourable position, the head will frequently descend. But if dangerous symptoms appear, the bladder becoming obstructed, the parts about the neck of the womb inflaming, the pulse rising in frequency, and remaining between the pains at 125 or more in the minute; or, if independently of these or other symptoms, the womb have been in strong action for twenty-four hours, the head not advancing—with *tenderness* and *prudence* the lever or forceps might be tried; or, lastly, should these instruments be unavailing, or should symptoms of danger manifest themselves, (to be effectually relieved by delivery only,) or even independently of such symptoms, should the head make little or no progress, though the womb have been in action after the discharge of the liquor for six-and-thirty, or eight-and-forty hours, compelled by an inexorable necessity, you must have recourse to the perforator, your reluctance being somewhat diminished by the recollection that, under such circumstances, the fœtus, even when unopened is generally born dead. In every labour attended with difficulties or dangers, there must be need for the exercise of a corresponding discretion; by individual contingencies, general rules must be modified, but adhering to the directions which I now prescribe to you, I am persuaded you cannot wander far from the correct line of practice.

To conclude then with a summary: when the vertex presenting, the face lies forward throughout the labour, and this is ascertained; in some cases you may turn, though with a trembling hand: in some cases you may rectify, always justified in trying that simple method of rectification, by lateral pressure with the fingers, as before mentioned. In the majority of cases, however, and especially if you are as yet inexperienced in the practice of midwifery, you may trust with confidence to the natural efforts; these failing, you may have recourse to the lever or the forceps; and these not availing, the perforator. Under the best management, (unless you can rectify,) these are bad cases, as the bruising, lacerating, and sloughing of the parts, and the death of the child, are to be apprehended.

Face Presentation.—When the head of the child presents, you sometimes have the face lying over the centre of the pelvis, the chin, I believe, usually lying on one side of the pelvis, and the vertex on the other, so that the greater lengths of the head, and the superior aperture, reciprocally correspond. Under the efforts of the uterus, the face presenting, the head is gradually worked down, and, at last, we find it lying in the outlet of the pelvis; the chin, at this time, usually taking its situation under the arch of the pubes, and the vertex and occiput in the hollow of the sacrum and coccyx, and upon the perineum; the child, when about to emerge, lying in the situation in which I now place it, with the ears on the side of the pelvis, the chin under the arch, and the occiput and vertex in the hollow of the sacrum and perineum, as before described. The head advanced thus far by a continuance of the pains, and the occiput being gradually rolled out from the hollow of the sacrum, the head is pushed into the world, the perineum, and all the softer parts, being stretched dreadfully, so that there is great danger of laceration, especially if you accelerate the escape of the occiput by the use of the lever or the forceps. I will suppose, then, that you are called to a case in which the face is presenting. What is to be done? must you meddle? must you use instruments? must you turn the child? Now, in the face presentation, as in the case already described, in which you have a presentation of the vertex, the face lying forward throughout the labour, I do allow that in occasional and exceptional instances, when the pelvis is large and the softer parts are lax, the accoucheur skilful and confident, and, above all, judicious, may carry the hand into the uterine cavity, and bring the child away by the operation of turning, laying hold of the feet as before described, and abstracting it under the crural presentation. As an *exception* to a general rule, this method of delivery may be proper enough; but observe, as a general rule of practice in face cases, with the whole weight of authority which I may possess with you, I condemn it. Do it ninety-nine times, and successfully, and I condemn it still; because you are meddling, because you are cramming your hand into the uterus without any sufficient cause; because you are, as it were, doing your best to tear the vagina; because ninety-nine operations undeservedly successful may lead to the hundredth, and the destruction of your patient. It is the same with respect to *rectification*; if you find the pelvis large, the softer parts lax, and your fingers very adroit, under such circumstances you may venture to introduce the hand, for the purpose of rectifying the position of the head, an operation sometimes perhaps accomplished with facility, while the head lies at the brim. In these cases, operating as I now demonstrate, with the fingers or the lever, you may make that which was facial, a vertex presentation. But understand again clearly, that this is an exception from a general principle—a practice unfit for the novice, though conceded occasionally to the adroit and experienced accoucheur. In presentations of the face, the stoical rule will apply; a rule which might with advantage be whispered into the ear at all times, when you are at the bed side—*naturam sequere*; delivery is a natural process, give therefore a fair trial to the natural efforts. When, then, you find a face case frequently, nay, generally, you have little to do; you need not send for another practitioner; you need not allow your minds to get into a state of perturbation, as if you had some mighty feat to achieve. You have only to sit quietly at the bed side, to support the confidence of the woman, to let the uterus act, to protect the perineum, to open your hands, as it were, and receive the child which nature deposits in them. If, however, the head be large, or the pelvis small, it may be in this, as in the vertex presentation, that the natural efforts fail; and, in such cases, you may try the lever or the forceps, but with gentleness, with caution, as on your dearest friend, bewaring lest you occasion a laceration or sloughing of the softer parts; and these instruments failing, should delivery be peremptorily requisite, you must then lay open the forehead, and discharge the contents of the cranium, when the head will readily descend.

Forehead Presentation.—Under presentations of the head, we sometimes find the forehead lying over the centre of the pelvis, instead of the face. And this presentation, made out in the way hereafter described, by a careful examination, can rarely, I believe, occasion much difficulty; for after there have been a few pains, the head turning somewhat, the vertex or the face descends, the case being afterwards managed by rules already prescribed. Ear presentations also occur, but they are so rare, or so easily conducted on the principles already laid down, that I consider it unnecessary to enlarge on them.

Foot or Crural Presentation.—By the Gallic accoucheurs, the crural or foot presentation is divided into no fewer than six varieties, in practice conveniently reduced to two kinds only, those in which the abdomen is lying *anteriorly* more or less, and those in which it is placed on the *back* of the mother, whether it bear a little to the right or left, or fall directly on the promontory of the sacrum.

Of all the crural presentations, the easiest and most simple is, that in which we find

the abdomen of the child lying towards the back of the mother. Now, in cases of this kind, the mode in which the child passes the pelvis is this: Under the strong action of the womb, the legs are gradually pushed beyond the outlet of the pelvis, when the thighs coming within reach, the accoucheur lays hold of them, a napkin being interposed, in order to render the hold more secure. The thigh grasped, he next draws down in the axis of the pelvis, which, as you may recollect, stretches downward and backward at the brim; careful not to lacerate or bruise the parts, and swaying the fœtus from side to side, or a little backward and forward, as the motion one way or other may most facilitate the delivery. If the pains are frequent, the accoucheur co-operates with the pains, but if the pains are unfrequent or wanting, he draws notwithstanding; for when the delivery is once begun, and the *umbilical chord* is brought down, so as to be compressed between the fœtus and the vagina, delivery should be promptly accomplished, because, when there is much and continual pressure on the chord, the child dies. But of this hereafter. In cases of this kind, when the breech is passing, take care that you do not lacerate the perineum. When the breech is abstracted, the abdomen begins to appear: lay hold of the umbilical chord, and draw it forth a little, so as to prevent extension during the further abstraction of the child. When the thorax begins to descend, lay your finger in the side of the pelvis, and if you find, on examination, that an arm be disposed to come down, draw it out at full length, and lay it along the side, so as to prevent it from starting at an angle, and lodging against the brim of the pelvis. In general, however, the arms do not descend by the side of the thorax, so as to demand this manœuvre. When the axillæ are approaching the external parts, a precaution of no small importance becomes requisite; I mean, the preventing the arms from taking place behind the occiput, and from becoming impacted between the front of the pelvis and the head, so as to render extraction impracticable. Now, to prevent this accident, prudence requires, when the arm-pits approach the inferior aperture, that you pass up the fingers, so as to get a bearing on the arms, and throw them as much as may be upon the back of the pelvis, towards the face of the child; and with these precautions, the axillæ of the child being brought down to a level with the external parts, the body of the fœtus being thrown out of the way, and into such position as shall favour the descent of the arm, putting all the fingers, if practicable, about the bend of the elbow, and sweeping the arms in succession over the cheek, you disengage them from the cavity of the pelvis. When the arms are drawn forth, usually the head descends without further difficulty, more especially if the cranium be small, or the pelvis be capacious; but should difficulties arise, you may endeavour to throw the face and occiput at the brim, on the sides of the pelvis respectively, so that the greatest lengths of the head and the aperture may correspond with each other; and then, bearing the head towards the symphysis pubis, yet drawing on the whole in the axis of the brim, on a line stretching from the navel to the point of the coccyx, you cause the head to come down. The head descending in this manner, when it reaches the outlet of the pelvis, put the face into the hollow of the sacrum, and the occiput on the symphysis pubis, and then drawing downward and forward, careful not to lacerate the perineum, you complete the delivery.

Now all this, on account of its importance, I demonstrate afresh. The feet presenting, you suffer the womb to act till the thighs are lying forth in the outlet of the pelvis; then, gently grasping the legs, you sway the body a little from side to side, or from before backward, careful that the genital fissure sustain no injury. When the breech passes, guard the perineum; when the abdomen passes, draw forth a little the umbilical chord, so as to prevent its extension during the subsequent descent of the child. When the thorax approaches, cautiously, tenderly, yet effectually, pass the finger into the side of the pelvis, and if the arm on either side be descending, extend it, and lay it at length along the side of the trunk, as now shown you. When the axillæ begin to enter the inferior part of the pelvis, as here, be very careful, as they come forward, to press the arms, as demonstrated, toward the promontory of the sacrum, preventing their impaction between the head and the pubes, and in this manner facilitating their subsequent descent. The axilla reaching the outlet, throw the body, as now shown you, into the position most conducive to the descent of the arm; placing three or four fingers about the bend of the elbow, and in succession swaying the arms downward with a sweep over the face. Afterwards, abstracting the head with due attention to its position, guarding the perineum, and indeed taking care that the whole operation be conducted with that degree of force only which may inflict no violence on the mother or her child. *Vir consili expers mole ruit suâ.* Contusion, lacerations, sloughings, decapitation, dislocation, fractures—these are the dreadful evils to which brute force may give rise.

Under the crural presentation, the abdomen of the child is sometimes situated anteriorly, the case being just the converse of the preceding. Now when the abdomen,

as examination shows, is situated on the front of the pelvis, there are *two* modes in which the child may be extracted, though not with equal facility; and first, we may draw down the feet as before, and the axilla being brought to a level with the outlet, we may extricate the arms by throwing the body thoroughly out of the way, getting the fingers into the bend of the elbow, and sweeping the arm out of the pelvis over the face of the child, behind the symphysis. Although, however, the child may be abstracted in this manner, you will find there is a difficulty in the abstraction of the arms especially, as indeed the machinery at this moment indicates to my feeling. Now this being the case, it is wise to throw the abdomen of the child to the back of the mother; and by laying hold of the thighs with the left hand, and spreading on the back of the fœtus the fingers of the right, you may sometimes transfer the abdomen to the posterior surface of the womb and vagina, making the turn I now demonstrate; when you produce a foot case with the abdomen seated posteriorly, to be managed by the rules already given. To make this change of situation, little skill may be required; but there is one point of nice determination, I mean the selection of the proper moment for performing the operation; for before the turn is made, you may, if you please, draw the head and arms into the pelvis; you may, if you please, impact them there, and you may, if you please, unwisely attempt to make the turn, when you have unwisely made the operation impracticable. But to proceed: "Incidit in Scyllam qui vult vitare Charybdem." In avoiding this error, you may fall into the other extreme; you may attempt to place the abdomen on the back, when only the tips of the feet are lying within reach, a practice unadviseable, as the turn, though accomplishable, must be effected with difficulty, seeing that a force applied to the ancles will not readily act upon the head and shoulders above. What, then, is to be done? On the whole, I think the best time for performing the operation, is when the thighs make their appearance; for in grasping them, you may get command over the body and other parts, the head and shoulders still lying above the bones of the pelvis, and of course not being impacted in the brim. It seems, then, that under crural presentations, it becomes the office of the accoucheur to co-operate by drawing down the child; but there still remains a question, on which I hope some of you have been ruminating, I mean, what is the proper moment at which the co-operation should be given? And here I may state to you a maxim of midwifery, on which, hereafter, I shall frequently lay stress; I mean, that in selecting the proper time of giving assistance, the accoucheur often shows his judgment, more than in the execution of the manual operation itself. The manual operations of midwifery are sometimes sufficiently easy, but much nice discrimination is required to seize the moment at which those operations should be performed. Let us suppose, for instance, a foot presentation, a first delivery, the parts rigid, the head large, the pelvis small, laying hold of the legs without reflection, you advance the child without difficulty, till the thorax enter the pelvis: but mark the result—in consequence of not selecting for your operations the proper moment, you find yourself, if I may be allowed the expression, on the horns of a dilemma; the legs have descended easily enough, the abdomen, too, has opposed but little difficulty, but the head and shoulders will not pass. Now if, anxious to avoid the laceration of the mother, you wait for a relaxation of the softer parts, the child lying as here demonstrated, with the legs in the world, and the head and thorax in the pelvis, its life becomes the sacrifice; pressure on the umbilical chord occasioning a suffocation, probably, as painful as the death of the felon who perishes by the rope. On the other hand, if desirous to preserve the fœtus, you draw down without delay, you lacerate and bruise the softer parts of the mother, so that by giving assistance at an improper moment, you endanger at once both the parent and her offspring. Aware of this risk, practitioners have endeavoured to lay down plain rules, which may enable us to decide when we ought, and when we ought not to interfere; and there are some who, not without reason, take their indication from the laxity of the parts, and the expansion of the os uteri; and if on examination they find that the parts are lax, and that the dilated os uteri is as broad as the disk of a crown piece, they commence the delivery, refraining from manual operations if the parts are rigid, or if the mouth of the womb be shut. There are others again, as Denman, for example, who ascertain the moment of interference by the descent of the child. If the breech is at the outlet, they deliver, and if it lie at the brim, they wait; the chord is not under pressure; the life of the fœtus is not in danger; a meddlesome midwifery is bad, and there is as yet no need for accelerating the birth. There are, again, other practitioners, who judge by a rule which, if of easy application, would perhaps be preferable to the former, and this rule is taken from the state of the umbilical chord. If the chord be pulsating strongly, they let labour proceed without interfering, considering that there is no danger of suffocation, as the fœtal heart is in full play; but if pulsation in the chord be weakened or suspended, they endeavour to abstract the fœtus as promptly

as may be, unless they believe it to be lost beyond recovery.

For myself, I am accustomed, in my own practice, to combine these rules, and to act under the influence of all three. With me, of course, it is a maxim *never* to deliver while the softer parts are rigid and the os uteri is little expanded; but if the softer parts are relaxed thoroughly, and the disk of the os uteri exceeds that of a crown piece, I deem myself so far justified in assisting the delivery. But this is not all: although the softer parts are yielding, and the os uteri is dilated, under the impression that meddling is wrong, and that the natural powers are great, I give a fair trial to the natural efforts, waiting, as Denman advises, till the breech is pushed down upon the outlet, and the chord becomes compressed; and then, finding the breech in the outlet and the softer parts relaxed, I proceed with the delivery, not neglecting the examination of the chord, advancing more rapidly if the pulse fall, and in a more slow and gradual manner if the firm beat of the chord indicate that the child is secure, always bearing in mind another axiom of British midwifery, I mean, that the life of the child is invariably to be sacrificed to the security of the parent, and never accelerating the birth more than the softer parts will bear.

When we meet again, Gentlemen, we shall resume this inquiry.

LECTURES

ON THE

INTELLECTUAL COMPOSITION OF MAN,

Delivered at the London Medical Society by

DR. HASLAM.

Lecture IV.

On Reason and Imagination.

If the human mind admitted of a division into distinct powers and faculties, from being the result of such components, its investigation would be attended with few difficulties: we should proceed directly to its analysis, ascertain its contents, state its definite proportions, and finally display the manner of its operations. In conformity to such hypothesis, the examination of this subject has been usually conducted; but these analytic chemists of the human intellect have unfortunately disagreed concerning the component parts. The elements of one tribe of philosophers have been viewed as compounds by other sects, and they have continued their disputations on assumed principles, until their readers were confused, and good sense retired in disgust from the contest. According to my own views, I should not define reason as any inherent faculty we possess, and which, in the progress of our mental career, is necessarily unfolded; not a consequent development from existing germs, but an acquirement, like the rest of our intellectual possessions. If reason were an inherent and original faculty of the mind, it might be employed indiscriminately on all subjects of investigation, and be considered as the test or touchstone of decision; but it can exert no such intrinsic energies, and requires the substratum of knowledge, as the indispensable conditions of its display. What, for instance, could be the reasonings of a man on the operation for lithotomy, either high or lateral, who was wholly ignorant of the anatomy of the parts concerned? Without an anatomical basis, what would be the amount of our reasonings on physiology? Indeed it is evident, that the reasoning on all subjects in our own profession (which is named as the most obvious illustration,) demands the previous attainment of sufficient knowledge. There must be existing premises whereon to institute the estimate, in order to arrive at the conclusion. Reasoning, therefore, is not the mere acervation of facts that constitute knowledge, but the *employment* of that knowledge for particular purposes. The most skilful and extended contrivances of language are inadequate to any precise definitions of quantity and value: they may describe certain general relations of both, but can attain no accuracy. The utmost that language can perform, is a rude and uncertain *comparison*, whether it be occupied on heat, distance, magnitude, time, space, value, or aggregates. It can only state an object to be large or diminutive, without any determinate size: it may indeed, compare substances, but cannot fix any accurate standard, and its range is only through the grammatical and indefinite degrees of comparisou. Among the many and discordant opinions that have been entertained on the subject of reason, some insist that it is the peculiar endowment of man; and if we speak of its highest operations, this will not be disputed: but there are some acquirements of animals, the result of their experience and practical efforts, which are, although in an inferior degree, fully entitled to the character of reason; wholly setting aside their instincts, which on a future occasion will be considered as tendencies or impulses, equivalent to reason, expressly furnished. If we consult that which is termed authority, for the definition

of reason, we shall most probably be disappointed. Mr. Locke takes it up as a faculty of the human mind, "That faculty, whereby man is supposed to be distinguished from beasts, and wherein it is evident he much surpasses them;" and after much discussion about syllogisms, which he discards as auxiliaries to reason, he confesses, that "the reasoning by numbers is the most certain."

In the lecture which treated conjointly of language and numbers, a sufficient preparation was made to demonstrate the importance of the latter, and it is now the proper stage of the inquiry to point out their application to that process of the human mind, which is termed reasoning. It has been shown, that mere language is inadequate to the purpose. Speech and its written character, can competently describe the objects of perception, their attributes and mutations, and invest these fixtures and motions with appropriate terms: but without numbers the duration of their existence, or the celerity of their motions cannot be ascertained. The consideration of *distance* may be selected as the subject of our reasoning, and we may endeavour to define it solely by language. We may call it the intervening space between any fixed points: this however affords us no *precise* distance. We may conjoin all the attributives of augmentation and diminution, and term it a great, long, wearisome, prodigious; or small, short and trifling distance: but with all these epithets, we do not define any precise intervention of space, no actual admeasurement, to employ as the premises or data for our reasoning. Admeasurement implies some definite standard, whether it be termed a mile, a foot, or an inch, and likewise their accurate subdivisions, which imply numbers; and therefore the distance, by correct admeasurement, is stated as so many miles or aliquot parts of this space, and in a similar manner the inch may be divided into a thousand parts, and any number of these may characterise the precise distance. It will therefore be seen that we cannot proceed to any accurate divisions of space, without the auxiliary of numbers, and the same process must be instituted, although with different standards, to ascertain time, magnitudes, weight, value, heat, and a variety of others; and the standards must be uniform, in order that its divisions and multiplications may be correct. If the reasoning by numbers be the most correct, it will be expedient hereafter, to examine the nature of our reasoning, when these symbols of accuracy and precision are not applied: and it will be found that such reasonings must be conducted exclusively by language. It must not be left unnoticed, that by those who consider reason as an independent power and integrant faculty of the human mind, it is defined to be "the power by which man deduces one proposition from another, or proceeds from premises to consequences." This is a mere hypothesis founded on the doctrine of syllogisms, which assumed, that as reason was an integrant faculty and natural property of the mind, they could successfully train and direct its operations, so as to enable it to deduce one proposition from another: that is, to make two propositions out of one, which would be equivalent to splitting a proposition. Every proposition is a sentence composed of as many words as are sufficient to render it intelligible; it conveys (whether true or false is immaterial) some distinct affirmation: as chemistry is the science of the composition, and definite proportions of material substances: or physiology explains the natural actions of living bodies. These are two distinct propositions, and nothing more can be deduced from them, than the meaning of the words that compose them. Propositions may, like numbers, be connected together, and the construction of a volume consists of such addition; or in other words, is a series of sentences. But as from the unit one nothing can be deducted, so from one proposition, contained in a sentence, nothing can be deduced; for if any of the words constituting the proposition be deducted, it will be mutilated, and its sense rendered imperfect. It is much less difficult to exhibit specimens of reasoning, and to investigate the steps of the process, than to afford a precise definition. There is however an avidity in the human mind for definitions on important subjects: they are convenient from their concentration, and their abbreviated form enables the memory to preserve them. Perhaps reasoning may be considered "the process whereby correct inferences are deduced from existing premises," and it may be added that this process is most perfect when numbers are employed. In order to illustrate this subject, chemical analysis, when properly conducted, may be considered very pure processes of reasoning, and accord with the definition that has been attempted. A person might discover a mineral substance in considerable quantity on his estate, and we will suppose him sufficiently instructed in chemistry to investigate its composition: for if he were altogether ignorant of this science, he could not possess that knowledge which is the requisite basis for his reasoning on its contents; and which has been stated an indispensable condition. By certain re-agents he would ascertain that it contained silver. This would constitute the *premises*. He would next take a portion of this mineral, for instance an hundred grains, which is a

definite quantity expressed by numbers, and submit it to a correct analysis, which would indicate the number of grains of silver, and also the different substances with which it was combined, and their relative proportions. The quantity of silver contained would lead him to calculate the cost of its extraction: and this would involve the computation of expense by amalgamation or smelting, also the cost of the necessary buildings, apparatus, fuel, and the price of labour. The different departments of our own profession are exemplifications of the reasoning process, according to the definition that has been exposed. Pharmaceutic analysis and compositions are an important branch of chemical science, and regulated by the precision of numbers. Surgery, both manual and curative, demands the highest exercise of reason: and if the practice of medicine be defective of that rational foundation, which an enlightened physiology and pathological discrimination can alone supply, it degenerates into blind and dangerous empiricism. The whole range of mathematical science, together with the mechanical and natural philosophy that are reared on its basis, are "the processes by which correct inferences are deduced from existing premises," and comprehend the necessary ratios, admeasurements, calculations, estimates, and proportions that are ultimately resolvable into numbers: and these sciences are the purest examples of the process of reasoning, because they admit of the unerring operation of numbers. It will be shown, in a future lecture, that the process of reasoning is one of the constituents of thought, and ought, perhaps, to be regarded as the highest effort of reflection. At least reason is the most important auxiliary to effective thought, and when it does not regulate and influence, the mind can only be occupied by fleeting recollections, and interested by the caprices of fancy.

We must now quit the delightful track of physical science, to drift on the ocean of verbal generalities. The meaning of reason, as it is adapted to the phenomena of nature, and the perceptions of the senses, has been sufficiently explained; and it now remains to examine the application of reason when solely conducted by language, and follow its wanderings into the regions of abstraction. The great contentions that have agitated the minds of our species, and still continue the conflict, have not originated from the nature of things, but from the meaning of words. The disputes in physical science have been comparatively few:—sometimes, indeed, the premises have been scanty and ambiguous; at others, the inferences have been precipitate and unsanctioned; but in many instances, experiment has corrected the former, and the latter has been rectified by a more patient investigation. In those sciences that have been denominated abstract, the premises have usually consisted of general terms, which are, for the most part, of vague and conjectural meaning, and it must be evident, where these data or premises are uncertain, that the inferences will be equally erroneous or obscure. It is worthy of remark, that the great mass of mankind is more delighted in discussing the abstract points which abound in law, physic, divinity, and politics, than in the examination of subjects, where the premises are defined, and the inference is the correct calculation from acknowledged data. Even in our own profession, we are usually more interested in attempting to reason on the subtilty of contagion, on nervous fluid and influence, vitality, peculiar actions and unsoundness of mind, than with the investigation of morbid anatomy, or of that physiology which may be established by experiment. Indeed, the world swarms with disputatious moralists, theologians, political economists, and metaphysicians, while scientific chemists and natural philosophers are the "rari nantes in gurgite vasto."

When we reason solely by language, and independently of numbers, as the vehicle of precision, our premises consist of terms, that have been indifferently denominated abstract or general; and from such indefinite data, the certainty of our conclusions will be considerably abated. If we inquire into the meanings of these general terms, we shall discover that they are subject to considerable variation. If we wish to refer to any standard of authority, we shall not find it in existence: and if we consult the best writers in our language, we shall detect them employing these general terms in different senses; and it is only necessary to inspect the accredited dictionary of our language to be satisfied of the truth of this assertion. These abstract terms are usually of the highest importance, they form the basis of ethics, of law, and of the metaphysic that has hitherto prevailed: sometimes, indeed, they have constituted the sources of our hopes and happiness; but more frequently, they have furnished the catalogue of our prejudices, impeded the progression of the human intellect, and converted the smiling prospects of nature, into the hateful gloom of misery and despair. It has been attempted by another method to fix the standard of meaning, and to rivet on words that permanence of signification, which ought to distinguish these signs of our thoughts and perceptions: and this criterion has been assigned to etymology. This science proposes to trace words to their original import, to exhibit their native ele-

ments and composition; and by this test, to purify them from the corruption they have imbibed from time, and the fashion that has dictated the "norma loquendi:" to hunt them in the rubbish of antiquity, to perpetuate their ancient sense, and rectify the distortions of that self-created authority, that has deflected them from their primitive meaning. It is really desirable that the signification of important words should be fixed and inflexible: but it is scarcely to be expected that the great mass of mankind should become etymologists, and revert to those dark and neglected periods, when the Saxon Heptarchy and the Norman Conquest imposed their several dialects, and from the union of which our present language has resulted. It is however indispensably requisite, that these abstract terms should possess a definite and unequivocal meaning, and as they approach to this unvarying standard, our reasoning from them will be proportionately correct. To conclude, the adaptation of the best means for the accomplishment of our purposes is the exercise of reason: the comprehension of the premises, implies knowledge as the substratum, and the deduction of the inference is the correct calculation, estimate or *ratio*, from which the term reason has been derived: and to perform which, with the highest certainty, requires the agency of numbers. It will likewise be evident, that our reasonings by these splendid generalities and sweeping abstractions, are the sources of all the great and interminable disputes that have agitated mankind. There is no subject on which they have been more profusely bestowed, than on the nature and operations of the mind itself; and these undefined expressions and assumed principles, have mainly constituted the metaphysic that has long prevailed, and that which exists at the present period.

Imagination.

However abrupt the transition may appear from the precise and measured steps of reason, to the excursive and unbounded flights of imagination—however opposite their nature and constitution, there is still a foundation for the opinion, that the doctrine of reason, according to the explanation that has been given, will be further illustrated and confirmed, by a correct search into the composition of that attribute of the human mind, which has been termed the imagination. It will be necessary to institute an analysis of this dazzling meteor of the intellect, as it has been generally regarded its scarcest and most enviable possession; and considered the stamp of genius, the life of description, and the soul of poetry. Although moralists, metaphysicians, and the writers on taste, have variously defined and eulogised this splendid talent: it has not to my own knowledge been sedately examined, as a subject of the intellectual physiology of man. Its etymology is most obvious, and perhaps, on this account, Mr. Addison has been induced to view it exclusively as the province of the sense of sight: in which case, it would be impossible for the blind to possess this acquirement, and would exclude Homer, Milton, and other poets of more modern date, from their acknowledged claim to its possession. Neither shall we be borne out in confining its operation to the organ of vision. Music and oratory would assert their prerogatives. The solemn stillness that precedes the storm, and the loud intonations of the tempest that assail the ear, when compared to the tranquillity of the human breast, or to the boisterous sallies of rage, would be the subjects of pure imagination; and the gratifications which contact confers, bestow on the touch a higher delight than mere vision can impart. It must however be recollected that these are mere impressions, and would expire on the sense, without the communication which speech unfolds: and as we proceed in this inquiry, we shall find, that we are principally to expect a development of this attribute, through the medium of language. By the wildest hypothesis, imagination has never been attributed to the brute creation; although some animals are distinguished for the acuteness of their sight, by possessing a more distant focus, or from being more microscopic than man: but the real solution is their want of speech, for the coinings of imagination can only be issued through this medium.

In the monuments we possess of Grecian art, the human form is displayed with the utmost fidelity to nature, by the consummate skill of the artist. These are not the efforts of imagination, but the representations of fact: and when they chiselled the fictions that exhibit their deities, or the fanciful creations of their poets, as satyrs and centaurs, the elements of which these figures are compounded were individually correct, and in conformity to the mythology that existed: they were not the invention or caprices of the sculptor, but the tasteful execution of that which language had previously described. If imagination be considered a component faculty, or necessary department of the human mind, some period must be assigned for its development. There is no evidence that the infant exhibits any of its manifestations: and although in the season of childhood, and at the commencement of speech, it has been the mischievous practice of the parent or nurse, to delight the pupil with the hopes of impossible attainment, to describe an incredible exuberance

of nature's bounties, to reconcile transmutations that are repugnant to the laws of nature, or to alarm the tender fabric of the intellect with the relation of evil spirits, goblins, apparitions, and the whole machinery of terror; yet the child itself breeds no such corruption. The delusions thus early impressed, usually continue through life; they constitute the foundations of our fears and prejudices, they enfeeble the mind, and stifle the natural curiosity that the child inherits, to become acquainted with the phenomena of this world; they retard his advancement in knowledge, and render him disobedient to the convictions of reason. These "horrible imaginings" are therefore not the spontaneous productions of the youthful mind, but a poison infused to beguile the credulity, and contaminate the stamina of the intellect. When we view man in the savage state, we have no inducements to consider him the creature of imagination; he is too strongly pressed by his necessities, to find leisure for the indulgencies of fancy, and he is a stranger to that elevated and chivalrous affection for the female, that calls forth the embellishments of language, that tends a grace to sentiment, and confers a dignity on feeling. In this abject condition of our species, his female associate is the mere slave of his occasional passion, and the offspring is solely protected by the instincts of its mother. Imagination is, therefore, the product of that state of civilised society, where opportunity is afforded for the cultivation of the human intellect, and where, by a generous intercourse, language imparts its ripened charm to nature, sensibility, and opinion. It has been supposed that imagination is directly opposed to reason, and if we speak of distorted images, and violations of possibility; if we revert to the tales of our childhood, to the feats of fairies, to the achievements of magicians and enchanters, and to the fictions of eastern descent; where the conditions of our nature are so happily improved, that discontented with the humble realities of this world, we soar into regions uncircumscribed by latitude, and create a new universe unshackled with the material lumber of the present; people it with a vast assemblage of adult philosophers, intuitively wise, and disdaining the tedious progression from infancy to manhood, who owe no obligations to perception, as the basis of their knowledge, and deride the maxims of experience, and whose will is attainment:—where love and opportunity are uncontrolled by time,—where beauty endures and enjoyment is permanent,—and where the gay delirium of intoxication is exempt from repentance, and a stranger to the headach. In such flights the opposition to reason is fully established, and the fabric will be found composed of "the stuff that dreams are made of," the wanderings of delirium, or the bold assumptions of insanity. It is certain, that imagination, even in its chaster garb, abjures the precise estimates, and nicer admeasurements on which reason proceeds; and employs those abstract expressions and ambitious generalities, that revolt from the accuracy and confinement of numbers. But imagination, of the purest quality, may exist without an infringement of probability, or contempt of the laws of nature. Imagination to the mind, is precisely the same attribute as the purest architecture, the most skilful contrivance and tasteful embellishments, are to a princely edifice: it is the legitimate subject of decoration and splendid ornament: but this implies the basis of science, and a conformity to the rules of art: any violation of the just proportions, the abandonment of interior convenience, or instability of foundation, would render it the object of ridicule and contempt. So imagination does not consist in a violation of the laws of nature, in repugnance to reason and perversions of thought. There are buildings solely constructed for convenient habitation, others as the repositories of merchandise, or the solid compilation where the manufacturer conducts his processes. These require strength and accommodation, and ornament would be superfluous and prejudicial. In like manner there are various subjects that do not admit of embellishments, and only require precision and perspicuity; such are title-deeds, and acts of parliament, arithmetic, works on mathematics, geography, navigation, and the whole range of natural philosophy. There are, however, many departments of literary composition, that require a more animated tone and glow of expression, than the sluggish repetition that prevails in leases and indentures. History, in order to be distinguished from the flatness of narrative that occurs in chronicles and annals, demands comprehensiveness of phrase, harmonious construction, and vigour of exposition; and the higher drama, where the energies of passion are depicted, can only produce the desired effect, by introducing such a train of imagery as shall be physiologically correct, such arrangement as is best calculated to impress, and adorned with those graces of appropriate expression, that are suited to the dignity or delicacy of the emotion.

Whenever the exuberance of fancy has assumed a prominence and distention, incompatible with the range of probability and the soundness of reason, it has merged on delusion, however picturesque and enchanting its visions may have appeared. Notwithstanding this luxuriance of fancy may be indispensable to the effusions of the orator, the vein of the poet, or the

flights of the romancer, and they can only consist of verbal ornaments: it is the bane of sober demonstration and philosophic research; and therefore for the continuance of health, and for the remedy of disease, is justly expelled from every department of medical science. The scrutinising investigations of the anatomist, where the eye and hand mutually combine, to ascertain structure and position; investigations, from which the multitude turn aside with horror and disgust, and to which the medical pupil can only be reconciled by the love of science and the consciousness of duty: these loathsome and baneful labours owe no obligations to fancy. The researches of the physiologist, if they proceed on the basis of anatomy, and are pursued by accurate observation and correct experiment, will be uncontaminated by those hypotheses, that are derived from the indulgence of imagination. The art of surgery in its comprehensive signification, is throughout an example of the most delicate and erudite perceptions, maintained by self-possession, and directed by reason. To be less serious, if the language of metaphor were applied to the history of diseases, and to the practice of medicine, it would excite the utmost ridicule and contempt. We should read the cold narrative of an ague, and the sultry description of an ardent fever. The copper-coloured eruptions of secondary lues, would be termed the blushes of Venus, nor would the dignity of her crown be overlooked. Human existence would dribble away in diabetes, and the different cavities become deluged by dropsy. Too much of this figurative nosology still prevails: the claws of cancer continue to extend their ravages, and polypus maintains its footing: St. Vitus yet leads the dance of distortion. The ranula sustains the excessive temperature of the fauces, the placenta is not confined to the shop of the confectioner, and the high and low states of insanity adorn the pages of a Gulstonian lecture. Chemistry, now screwed up with mathematical precision, was once under the spell of this powerful enchanter, and in its older volumes we find that when silver was amalgamated with mercury, and this latter volatalized to obtain the residuum of the former, it was announced, "That the fair Luna melted in the embraces of the subtile and insinuating mercury; but when the torture of fire was applied, the inconstant deity flew away, and abandoned the credulous goddess to her own flame."

From the manner in which the elements of mind have been considered, and from the reasonings that have been employed, it is not unfair to conclude, that the confederations of fiction and embellishment, that under the corrections of taste, constitute imagination, are principally the business of *language*, and into which all our thoughts must be ultimately resolved, for the purpose of communication. There are some human beings, whose native capacities are of a finer staple, and enjoy a more exquisite sensibility, and whose perceptions are more distinctly impressed: whose mental vision discerns the minuter objects in nature with superior clearness, and can also contemplate her prospects in an ampler range. These favoured individuals, and they are of rare occurrence among our species, select from the copious vocabulary they have accumulated, that appropriate and emphatic phraseology, that imparts a glow to description, endows sentiment with animation, and enlists sympathy in the display of feeling. That the splendid power of imagination must likewise imply a higher excitement of the capacities, is beyond dispute: there are times when we feel a consciousness of surpassing energies—a facility of execution—a vigour and endurance of reflection—a promptitude and felicity of expression, that on other occasions we court in vain: and these are the fortunate concurrences that give birth to imagination.

LECTURES ON CHEMISTRY,

BY

PROFESSOR BRANDE.

Delivered at the Royal Institution of Great Britain.

Lecture VII.

On Heat.

Gentlemen,—At the conclusion of the last lecture I showed you, that nothing could be more arbitrary or indefinite than to assume any given degree of temperature, as the boiling point of water. I showed you, that that phenomenon depended entirely on the degree of pressure to which the liquid might be subjected; and that under a pressure less than that of our atmosphere, it boiled at a much lower temperature than 212°; on the other hand, under increased pressure, fluids require a higher temperature to produce their ebullition, as may be seen in this apparatus. Here is a brass globe, composed of two hemispheres, strongly secured together; into its upper part a column of mercury is introduced, to which is attached a graduated scale; on the one side of this column is a stop-cock, and on the other a thermometer, communicating

with the interior of the globe; the globe is half filled with hot water, and it will be seen that upon applying heat to this vessel, the stop-cock being closed as soon as the water boils, that the temperature of the water and its vapour will increase with the pressure, which is measured by the ascent of the mercury in the barometer tube. The thermometer, on the other hand, at the ordinary atmospheric pressure, being at 212°, will be raised under a pressure of five inches of the mercury to 217°, and under a pressure of thirty inches, to 242°, or thereabouts, the thermometer rising about 1° for every $\frac{37}{1000}$ of an inch of barometrical pressure. The barometer tube serves the purpose also of a safety valve, as it is not longer than sufficient to resist the pressure of two atmospheres, and the globe being more than equal to the resistance of that pressure. The experiment is here made to determine the fact, not to determine the ratio between pressure and temperature. Such then, you perceive, are the limitations with which the term boiling point is to be understood. I should state to you, that in the "Manual of Chemistry," the temperature of steam, at high pressure, is very materially understated, and the present statement, taken from Dr. Wollaston's apparatus, is correct as far as it goes.

We now come to Dr. Black's experiments, which were undertaken to determine the nature of steam. He placed a quantity of water in a vessel over a fire, and put a thermometer into the water, when he observed that it went on increasing in temperature until the water began to pass off in the state of vapour, but that it then acquired no farther increase of heat beyond that point; the heat then becomes latent, and is consumed in the formation of steam. The converse of this holds, that the condensation of the vapour gives out its latent heat, to be reduced again to water. Dr. Black found, that water at 212° passed off in a state of vapour; he then noted the time required to heat it up to that point, keeping the same degree of heat applied to the water until the whole was evaporated, and marking the time consumed by that process. He then calculated to what the temperature would have risen, supposing the increase to have gone on in the same ratio, above 212°, as it did below it, and as the temperature of the steam was the same as the temperature of the water, Dr. Black inferred that all the heat above 212° was consumed in the conversion of the water into steam. He estimated this quantity of heat at 810°; that is to say, or to put the subject in a more intelligible light, he found that the same quantity of heat which was required for the total evaporation of the water at 212°, would be sufficient to have raised the water to 810° above 212°, or to 1022°, had the water continued in its liquid state.—There are some other modes of ascertaining the latent heat of steam, which induce us to place it at about 448°. Here you observe an enormous abstraction of heat when water is converted into vapour, and that the converse is also the case. I might illustrate this by a variety of methods, but I shall take a few of the simplest. Here is a simple experiment, showing that on the condensation of steam, heat is involved. The apparatus, as you see, consists of a small boiler, into which are inserted a safety valve, a blow valve, and a pipe, which communicates with this jar of water, into which a thermometer is introduced. To give you a notion of the immensely heating power of steam, let us suppose that into the half pint of cold water now contained in this jar, we condense one ounce by weight of steam; we shall find, as you now see, that the whole will, by this means, acquire the temperature of boiling water; but if you add one ounce, by weight, of boiling water to the cold water, we should only elevate the temperature to the mean of the two fluids. Of course you can easily measure the increase of bulk which the water receives by the condensation of the steam on the sides of the vessel.

In the common process of distillation, you have another instance of the great quantity of heat required to cause the fluid in the still to pass into vapour, and of the great degree of heat again given out by its passing into the fluid form, in its progress through the warm tub. Now there are a number of liquids which boil at a much less temperature than water, under the ordinary pressure of the air-pump; but I shall not dwell upon these matters here, because they will be pointed out under a more appropriate head hereafter. Formerly, we used to let the steam pass away unemployed from breweries and other manufactories where large quantities of water are consumed; but now that its great heating power is much better understood, it is turned to better account, and the quantity of fuel very much economised. There is this advantage attending this mode of heating bodies by steam, that you can heat them up to any required degree, by using steam under a given degree of pressure; and in pharmacy, and other branches of art requiring great nicety, this is a very valuable property to obtain. We are now considering steam at high temperature, but let us consider its production at a lower temperature; and, for this purpose, let us employ water in vacuo, or a fluid that will pass readily into a state of vapour, at a low temperature. Now ether is such a body; if you pour a little ether into the palm of

your hand, it soon evaporates, and the hand feels cold, that is to say, the heat of the hand is carried away by the vapour of the ether; and by suffering ether to trickle over the surface of a thin vessel containing water, so much heat will be abstracted by the evaporation, as to convert the water into ice. If you evaporate water at common temperatures, under an exhausted receiver, the consequence will be, that it will be cooled so rapidly, that the quantity of heat required to convert the one quantity of water into vapour, will be taken from the other portion, which will be converted into ice. Now here is a very simple mode of showing this, by an instrument invented by Dr. Wollaston, which he called a *cryophorus*.

It is, as you see, a glass-tube with a bulb at each extremity. One of the bulbs is about half filled with water, and a good vacuum is produced in the other, by boiling the water and sealing the tube whilst full of steam. On immersing the empty bulb in a freezing mixture, as you see here, the water soon freezes in the opposite bulb, although the tube which intervenes, is from two to three feet long. The vapour in the empty bulb is condensed by the cold, and a fresh quantity of vapour arises in succession from the water in the other, by which such a quantity of heat is abstracted from it, as to cause it to freeze. It is a very simple method, and, on the whole, a very elegant one, to show the fact in a very plain way. The theory of it appears to be just this: the cold condenses the vapour in the bulb immersed in the freezing mixture, fresh vapour is brought over to supply the vacuum formed by the condensation of the first portion, and the heat is so rapidly abstracted from the fluid water by the escape of this vapour, as so convert it into ice. The operation of wine coolers, and cooling lotions, is on the same principle, namely, the abstraction of heat from surrounding bodies, by the conversion of fluids into vapour; and hence the great advantage of sponging the skin with water in many febrile diseases, and the refreshing feeling which the sponging of the skin produces in the summer season; it is a much safer mode of cooling the body than immersion, and equally effectual.

We know nothing of the nature or cause of heat; some suppose that it is a peculiar fluid, which has been termed *caloric*, and certainly there are many phenomena in favour of the existence of this fluid. Others have described the phenomena mentioned, to a vibratory motion of the particles of matter, and that the sensible heat or temperature would increase with the velocity of the vibrations, and that increase of capacity for heat, would be produced by the motion being performed in greater space. Upon another hypothesis, *temperature* is referred to the *quantity of caloric* present, and the loss of temperature, which happens when bodies change their state, viz., in liquifaction, depends upon the chemical combination of the caloric with the solid, and in the case of conversion into the gaseous state with the liquid. I must repeat, however, that of the nature or cause of heat, we know nothing.

In many natural operations, the conversion of water into vapour, and the condensation of vapour, in the form of dew and rain, is a process of the utmost importance, and tends to the equalization of temperature over the globe. The vapour from the earth's surface having been carried into the higher regions of the air, becomes condensed in the form of snow upon the mountain tops, and other portions of vapour again descend in the form of rain and dew, to give fertility to the soil, and equalization to the temperature of the earth.

In the next Lecture we shall commence with *electricity*, and investigate some of the principal phenomena connected with the subject.

Lecture VIII.

On Electricity.

Gentlemen,—We have now cursorily to describe the principal phenomena afforded by electrical action; to consider briefly its influence on the powers and properties of matter; but more particularly to examine how far it is connected with chemical changes.

Twenty-five years ago it would have been difficult to observe any connexion between electricity and chemistry, but so great have been the advances made of late in this branch of philosophy, that it is now pretty generally admitted, that not only the main phenomena evidenced in chemical action are due to it, but that there is scarcely any chemical change effected, in which electricity is not concerned. Without taking you back into the early history of electricity, I may just advert to the period when Volta observed the phenomena produced by the contact of dissimilar metals, from which may be dated the great connexion which has since been found to exist between chemistry and electricity. The history of the science may be learnt from books, but the facts cannot be shown you so well as here. What are called electrical phenomena, are easily exhibited in a variety of ways. If a piece of dry warm flannel and a piece of sealing wax be rubbed together, or a tube of glass be rubbed upon silk, they become capable of attracting and repelling light bodies; as, for example, a feather suspended by a silk, or a pith ball suspended in the same way. The

phenomena afforded by electrical action are now much more easily shown than formerly, by the contrivance called the electrical machine, which is a cylinder of glass rubbed over with an amalgam of zinc and mercury spread upon silk. In these instances, the bodies mentioned are said to be electrically excited, and appear luminous when in a dark room. Now in ordinary cases we employ two small pith balls for the purpose of ascertaining the electrical state of bodies, these are suspended by a fine thread, and if they be electrified by touching them with the flannel or sealing wax, they repel each other, as you now see; but if one of the balls be touched or electrified by the wax, and the other by the flannel, they then approach each other, and are said to attract each other. The same thing happens if the balls are touched with the glass and silk, showing a difference in the electricities of the different bodies, from which we are led to conclude, that bodies *similarly* electrified *repel* each other, and that bodies *dissimilarly* electrified *attract* each other. Now when we say that certain bodies under certain electrical conditions repel and attract each other, we use the terms merely to express the appearances of the phenomena; the separation and attraction being probably owing to new relations established between them and the air, or surrounding bodies.

Now, if one ball be electrified by sealing wax rubbed by flannel, and another by silk rubbed with glass, the balls will repel each other, showing that the electricity of the silk and the sealing wax is the same. If, on the other hand, one ball be electrified by the sealing wax, and the other by the glass, they then attract each other, showing that they are oppositely electrified. Such experiments are most conveniently made with a large downy feather, suspended by a silken thread; if an excited glass tube be brought near it, it will receive and retain its electricity; it will be first attracted and then repelled, and upon re-exciting the tube, and again applying it, it will not be again attracted, but remain in a state of repulsion. Upon again approaching the excited sealing wax to the feather, it will be attracted, and remain in contact with the wax till it has acquired its electricity, when it will be repelled, and, in that state of repulsion, will be attracted by the glass. Care must be taken that the feather remains freely suspended in the air at some distance from surrounding bodies, in order that its electricity may not be carried off. To the phenomena which have just been exhibited, the terms *vitreous* and *resinous* electricity were given; but Franklin observed, that there was no difficulty in rendering bodies resinously electrified, vitreous, and *vice versa*; from which he inferred, that the electrical states of bodies did not depend upon their nature and composition, but upon other circumstances. He was, therefore, led to ascribe the electrical phenomena, not to the presence of two fluids, as before supposed, but to one fluid diffused over nature in a state of equilibrium; but that as soon as you disturbed the equilibrium of this fluid in any way—if you took away a portion of it from a body, he said that such body was then in a state of *negative* electricity, and that the body to which it was added was in a state of *positive* electricity. He supposed that when glass is rubbed with silk, a portion of electricity leaves the silk and enters the glass, which then becomes positive, and the silk negative; but when sealing wax is rubbed with flannel, the wax loses, and the flannel gains electricity, the latter being positive, and the former negative. Here then we have arrived at a knowledge of this much, that whatever may be the cause of electricity, bodies similarly electrified repel each other, and when electrified dissimilarly, they attract each other. The consequence of which is, that whenever you see bodies repelling each other, you infer that they are similarly electrified, and that when they attract each other, they are dissimilarly electrified.

Those bodies which become electrified by friction are called electrical, and here is a table arranged in such order, that the substance which precedes the other is, when rubbed with the substance following it, positive with regard to it:—

Catskin	Paper
Polished glass	Silk
Woollen cloth	Gum lac
Feathers	Rough glass

But with regard to glass, you find that, although it is highly negative in the rough state, it is positive when polished.

Upon the principle of similar bodies repelling each other, and *vice versa*, we construct instruments called *electrometers*, or *electroscopes*, to show the degree of excitation in which any body may be, and not merely to enable us to judge of the degree, but also of the electrical state of the body, whether negative or positive. One of the best electrometers is, as I have before stated, that mode by suspending two pith balls by a piece of silk; but for any delicate purposes, an instrument of this kind is employed. Here you see is a glass jar, in which two slips of gold leaf are suspended by a wire attached to the brass cap of the cylinder; the glass jar serves the purpose of preventing the two pieces of gold leaf from being agitated by the air, and seems to insulate the brass cap, whilst it enables you to see what is going on. Now if you communicate any electricity to the cap of the instrument,

it is immediately conducted to the leaves suspended in the glass. I now convey an electrical charge to the cap, and you see that the leaves instantaneously diverge, and so remain. If you wish to know whether the electrical state in which the leaves are seen is positive or negative, you must approach a glass tube which has been just rubbed with silk, or a piece of sealing wax rubbed with flannel. You see that, as I approach this glass tube to the cap of the electrometer, the leaves diverge still farther, from which you are to conclude that the leaves are in a state of positive electricity. If I bring the stick of sealing wax toward the jar, you observe that the leaves begin to approach each other; I am to conclude, therefore, that they are in an opposite electrical state to that of the sealing wax, that they are positively electrified, and then the mutual annihilation of the opposite electricities would ensue.

The delicacy of this instrument, as an electrometer, is much diminished, and is indeed rendered nearly useless when damp, which led the late Mr. Singer to make an alteration in the construction of the instrument, which may be deemed a considerable improvement. The insulation of the cap is secured by a glass tube, about four inches long and one-fourth of an inch in internal diameter, covered on the outside and inside with sealing wax, having a brass wire of about the twelfth or sixteenth of an inch thick, and five inches long, passing through its axis, so as to be perfectly free from contact with any part of the tube, in the middle of which it is fixed with a plug of silk, which keeps it concentric with the internal diameter of the tube. Various contrivances have been used as electrometers, but there is one on the table which I may mention to you as an useful instrument for ascertaining more gross states of electricity, such as the amount of the charge of the Leyden jar, and so on; it is called the *quadrant electrometer*, and was invented by Mr. Henley. It consists, you observe, of a rounded stem of metal, to the side of which an ivory semi-circle is attached; a pin is affixed to the centre, upon which a very thin piece of cane, or ivory, about four inches long, with a pith ball at its lower extremity, turns freely, traversing the semicircle, the lower half of which is divided into 90°, as an index. When not electrified, the index hangs parallel to the stem of the instrument, but when electrified, it is carried from it, marking the intensity of the electricity by the number of degrees it may traverse on the graduated semicircle.

Now you will perceive, that almost all our common electrical apparatus consists of glass, or resin, or some of the metals, and we use the two former in order to preserve the substance under examination in its natural or acquired electrical states. When a charge of electricity is given to this piece of metal, attached to the glass tube which I now hold in my hand, the electricity is instantly diffused over its surface, and is therefore a good *conductor*, but it does not pass along the glass to my hand. We call such substances, therefore, insulators, or *non-conductors*, because they do not transmit or diffuse the electricity, receiving it only upon the spot touched; such are dry air, glass, sulphur, and resins, and as such substances acquire electricity by friction, they are called *electrics*; whilst the metals, which are all good conductors, do not become electric by friction, are called *non-electrics*. You may rub a piece of metal to all eternity, and you will not make it electric, because the electricity passes off as fast as it is formed. There is no constant relation between the states of bodies and their conducting powers; solids and fluids, in general, are sometimes conductors, sometimes non-conductors. Among the solids, metals are conductors; resins and gums, non-conductors. Among the liquids, acid, alkaline and saline solutions are good conductors; pure water is an imperfect conductor, and oils are non-conductors; air is a non-conductor under ordinary circumstances, but when highly rarefied it is a good conductor, and that is the reason why, when lightning strikes a house, it frequently descends through the chimney, the rarefied air in the chimney being a good conductor.

The appearance of electric light is modified very much by the density of the medium through which it passes being brighter and whiter in proportion as the air is dense, whilst in the vacuum of the air pump it becomes paler and paler in proportion as the vacuum is perfected; so that it would appear as if light depended upon some obstruction in the air, and that the light depended upon the compression of the air by the passage of the electricity through it.

Now there is one effect connected with these experiments of making bodies electric by friction, which is, that when one electricity is excited, the other is always in such proportion as exactly to annihilate or counterbalance it. When one body, or system of bodies, is negative, the other is invariably positive: such was Dr. Franklin's theory. When I rub this tube (holding a glass tube in the hand) with a piece of silk, I take away a portion of its electricity, which I communicate to the rubber, and if I convey these powers to a conductor, they are found to neutralise each other, and no electrical phenomena will be afterwards visible; and this is the theory usually adopted in England. The French have taken up two

theories, supposing that there are two electrical fluids; but I have assumed that of Franklin, because it appears to me to be the most simple; and as we know nothing of its nature, it is as well at present as any other.

We avail ourselves of an *electrical machine* to accumulate electricity, and to show its effects in the accumulated state. Now you will remark, that the electrical machine is nothing more than a glass cylinder or plate conveniently mounted, as you see here, with a rubber and conductors. Here is a glass cylinder turning between two upright pillars, and here are two smooth metallic conductors, nearly equal in length to the cylinder, and of about one-third its diameter, fixed upon glass pillars. One of the conductors has a cushion coated with a layer of amalgam, which is attached to it by a spring nearly as long as the cylinder, and about an inch and a half wide, to the upper part of which a flap of oil silk is sewed, which should be long enough to reach from the cushion over the upper surface of the glass cylinder. The other conductor placed in front of the cylinder is armed with numerous brass points turned toward the cylinder, and you will find that you have the electricity of the glass accumulated in the latter, which is called the positive conductor, and the electricity of the rubber in the other, which is called the negative conductor, the electricity accumulated there being negative. The pressure of the rubber against the glass is regulated by a screw, and the motion of the cylinder is in the direction of the silk flap. To put this machine into good action, every part of it should be perfectly clean and dry; the cushion should be rubbed over with amalgam, and applied by a gentle pressure to the cylinder. The best amalgam is composed of one part of tin and two of zinc melted together, and mixed while fluid with six parts of hot mercury in an iron mortar. The mixture is then triturated, till it forms a fine powder, which is then to be made into a paste with hogs' lard. Now Dr. Franklin supposed, that the electricity was drawn from the one conductor and accumulated in the other, and you see, that when these conductors are made to touch by connecting them to a brass rod, a spark is produced, which shows the annihilation of the two electricities; but if you establish a communication between the two conductors, no electrical phenomena will be exhibited by the working of the cylinder. This machine is well fitted for the exhibition of these and a number of other electrical phenomena, and is usually called Haine's Electrical Machine.

Here is another form of the electrical machine, contrived, I believe, by Dr. Engelhaus: it is a circular plate of glass mounted perpendicularly between two cushions, to which is attached an insulated glass stem, and it is convenient to varnish over the stem, because lac and resin are better conductors than the glass itself. There is an awkward accident to which these machines are liable, namely, that of cracking in their centre; but the remedy is to bore holes in different parts of the glass, and we now have such machines in use for years. If you turn the machine gently you will render the conductor positive, and it will attract a ball that may be opposed to it in the negative state, not by contact, but by proximity or *induction*, and this is universally the case, but why, we do not know. This fact was elucidated by a contrivance in which three insulated conductors, placed at a little distance from each other, the last being in communication with the earth by means of a small chain; at the extremities of each conductor two pith balls are suspended, and although at some distance from each other, they become electrified by induction, and are, as you observe, set in motion. Here therefore, we find, resumed Mr. B., that the ball opposed to the conductor of the machine being negative is attracted by it, but the moment you make it a matter of contact, you take away the attraction between the different bodies, because they are then brought into similar states of electricity. When these opposite electrical states have arrived at a certain intensity, sparks pass between the different conductors, and then the electrical phenomena cease. The *spiral luminous tube*, as it is called, exhibits this fact remarkably well: small spangles of tin foil are placed within a small distance of each other, each of which represents an insulated conductor; the first spangle being held near the charged conductor of the machine and the last in the hand, the body of the experimentor serving to keep up the communication with the earth, a series of brilliant sparks will pass through the tube, indicating the annihilation of the opposite electrical states in the numerous spangles, or insulated conductors.

Now if you consider the phenomena of the excitation of electricity, of the attraction of dissimilar bodies and of the repulsion of similar bodies, and the polarisation of bodies by induction, you will be in possession of the ground-work of the subject of electricity. I wish again to state to you, however, that our time only allows us to show the simple facts, and we must refer you to works for a more detailed account of the science.

In the next lecture we shall consider the phenomena of the Leyden jar, and show you the modes of accumulating electricity by induction.

FOREIGN DEPARTMENT.

GENERAL OBSERVATIONS ON ANEURISM.

By G. Breschet, *Chefs du Travaux Anatomiques, at the Faculty of Medicine, Paris.**

The word *aneurism*, used in too extensive a sense by some, and too limited by others, has given rise to numerous discussions and mistakes on this important branch of pathological knowledge. In fact, by this term, different morbid states of the heart and arteries have been understood. By aneurism of the heart, is generally understood dilatation of the auricles or ventricles, with or without diminution or increase of the thickness of the parietes; and the possibility of aneurism by rupture of the fleshy parietes with dilatation of the membranous coverings, has been denied. The formation of true aneurism of the arteries is not supposed to depend on a dilatation of the whole calibre of the vessel, but an alteration of the middle and internal tunics, as well as the rupture of these coats, and the existence of a tumour on the side of a vessel, by the extension of the outer membrane, in which blood is contained. Sennert, Fabricius, and Scarpa, have affirmed, that all aneurisms of the arteries are formed in this manner, and have rejected the idea of aneurism, by the dilatation of the parietes. Scarpa particularly understands by aneurism, a sacciform tumour, situated on the side of an artery, formed by the cellular or external membrane of the vessel, in consequence of a rupture of the internal diseased tunics. The essential conditions of aneurism, according to Scarpa, are, 1. The existence of a tumour on the side of the vessel, formed by the cellular tunic, in which coagulated blood is contained and arranged layer on layer. 2. An opening, in some spot of the artery, produced by the rupture of its middle and internal tunics, which, opening, leads into the cavity of the tumour. 3. A previous morbid state of the internal and middle tunics, such as their friability by ossification or their ulceration.

Scarpa's observations are correct as far as they go, for aneurismal tumours most frequently depend on a *steatomatous* alteration of the parietes of the artery; but, it is equally correct, that true aneurism also exists. In fourteen cases of aneurisms, examined by Burns, he found only one case in which the doctrine of Scarpa was invalidated.

* Repertoire Generale d'Anatomie. Tom. iii. p. 366.

Aneurisms of the heart by dilatation undoubtedly occur, but those by rupture of the parietes of this organ have been simply alluded to by authors, but never accurately described. Nevertheless, according to Kreysig,* what Scarpa says of the sacciform aneurism of arteries is applicable to the heart, because this organ sometimes presents a state similar to that exhibited by the arteries affected with sacciform aneurism. Morgagni† relates a case of melicerous tumour, resembling a cherry in shape and size, the half of which was merged in the substance of the heart, whilst the other half projected externally, and contained serum. Lietaud has transmitted to us the history of a scirrhous tumour the size of a nut, found at the base of the heart, near the insertion of the pulmonary artery, and another tumour of the size of an egg, situated on the right auricle, and containing a *putrid humour*. Lastly, he speaks of an excrescence resembling a pigeon's egg, surrounded with several other smaller tumours united at their surface, and filled with a matter similar to the lees of urine. M. Kreysig, not knowing what character to assign to these tumours, and in what class to rank them, says, that they may perhaps be *true aneurisms of the heart*, since they contained decomposed blood.

In ten cases of false consecutive aneurism of the heart, mentioned by M. Breschet, the disease was situated near the apex of the left ventricle. The following are the conclusions to which he has arrived:—

1. That the heart may be affected with a disease, hitherto undescribed by medical writers.

2. That this disease appears particularly to belong to the left ventricle of the heart.

3. That the apex of this organ is the most frequent seat of this complaint.

4. That this affection is an aneurismal tumour.

5. That this aneurism, from the mode of its formation, the condition of its parietes, and the parts contained in the cyst, may be classed with the false consecutive aneurism of the arteries, in the sense given by Scarpa, to the word *aneurism*.

6. That the heart is subject to the same kind of aneurism, as that with which arteries are usually affected.

* Die Krankheiten des Herzen systematish bearbeitet und durch eigene Beobachtung erlautert Von D. Fried. Ludwig Kreysig Zweiter Theil, p. 377. Berlin, 1815.

† Decans. et sedib. morbor. epist. xxi art. 4.

SKETCHES

OF THE

MEDICAL SCHOOLS OF SCOTLAND.

No. VII.

GRADUATION.

"Paulo majora canamus."

The second of August, eighteen hundred and twenty-seven, will be celebtated by the future historian of the University of Edinburgh, as one of the most memorable epochs in its annals. The student of centuries hence, as he turns to the record of this festival, may sigh that he had not been born in the more glorious days of his deserted alma mater; and his contemporary professor, while gloating over the description of so rich a harvest of fees, drop a tear on the page in compassion for the degeneracy of his own times and his beggarly account of empty benches. I had marked down this solemn fete in my sentimental journal, which I preserve apart from my case and cash book, for an earlier notice; but the more I considered the importance of the theme, the more incapable I found myself of rendering it literary justice, and like the philosopher, interrogated on the nature of the Deity, borrowed time from my own incompetency, in order to compensate for deficiency of power by prolonging the term of meditation. It is, perhaps, so much the better to have permitted the deeper impressions of the picture to soften down by procrastination; for even at this distance of time, the contemplation of the simple fact, of one hundred and sixty doctors being let loose on the world in one day, not to include the circumstances by which this awful event was accompanied, gives to one's head that dizziness communicated by a peep down Dover Cliff, at Shakspeare's samphire gatherer, or a glance at Satan, rising in all the majesty of evil, from Milton's broad and level lake of fire; or, in short, by any of the other poetical images which have excited the "tinnitus aurium" of the true sublime in the ears of the critics.

The advent of this great day was accompanied by many extraordinary phenomena of nature and art. For several weeks previous to its arrival, the good people of the High-street were seriously alarmed by the daily appearance of a mysterious apparition, busily moving through the machinery of the musical bells of St. Giles's, which was at length, by the investigation of the police, proved to be Dr. Duncan, junior, preparing, as it has been supposed, a chime suitable to the solemnity of the occasion. The "*Scotsman*" announced that the coruscations of the aurora borealis were more frequent and brilliant than usual; and Professor Leslie, the only modern astrologer who has learned the science in the original Chaldean manner, by observing the motions of the stars, while employed in the simple character of a shepherd on the hills of Fifeshire, was seen on the observatory of the Calton, with his eye fixed in studious abstraction on the horoscope, to determine a lucky hour for the commencement of the ceremony. Mr. John Wilson, the Tanitor, and Dr. Hope, the "Dives" and "Crœsus" of the University of Edinburgh, were remarked to hold their consultations oftener, and to have been so absorbed in their meditations as not to recognise their colleagues in office. The object of these deliberations was conjectured to have been, the determination of the most appropriate place for conducting the spectacle; neither the new examination hall nor the library of the University, unfortunately being yet completed, Dr. Hope's aristocratic propensities induced him at first to suggest the propriety of celebrating the jubilee in the picture gallery of Holyrood-house, in presence of the likeness of the two hundred Scottish kings, all executed from life by one artist and from the regal physiognomy of a coal-porter, who sat for the whole; but Mr. Wilson prudently over-ruled the proposition on the plea of inconvenience. The great room of the Waterloo hotel, and the assembly rooms in George-street, held the council for some time in suspense between their respective merits; but then the notion of profaning the "summos honores medicinæ," by conferring them in the presence of waiters and chambermaids, or amid the reminiscences of reels and Neal Gow, was what Dr. Hope's ideas of the dignity of the medical character could not endure. In this dilemma it was finally resolved, that as he was to act as master of the ceremonies, he would find himself more at his ease, more in short at home, in the chemical theatre. Accordingly, stills and stoves, tongs and tinder-boxes, air pumps and alembics, crucibles and conductors, funnels and fire-shovels, glass rods and gasometers, rests and retorts, were all removed; and when the sky-lights were scoured, the walls whitewashed, the benches brushed, the room certainly had the appearance of respectable renovation. There was still, however, another important question to be settled, and that was, how or where gowns were to be provided for the multitude, Mr. John Wilson being entirely unprepared in this respect, never suspecting, of course, that such a demand would

have been made on his wardrobe. Fortunately the Court of Session had just terminated its sittings; the "gentlemen of the long robe" had hung up their garments for the summer vacation, and here opened a prospect of supplying the deficiency, provided there was found no legal impediment to the loan. Mr. Bell, professor of Scots law, was therefore consulted whether there was any valid objection, *de jure* or *de facto*, against the induction of candidates with the plenipotence of a doctor's degree while habited in a lawyer's gown; and having given his deliberate opinion that there was no informality in the proceeding, an immediate order was obtained from Mr. Napier, professor of conveyancing, for the transfer of as many gowns as were necessary from Parliament-square.

During these several preparations, superintended by Mr. Wilson and Dr. Hope, the creaking of presses striking off theses, was (the wind favouring) distinctly audible on the top of Arthur's seat; while below, nothing was to be seen but the authors—

"With fire in each eye, and papers in each hand."

And here commenced my own humble part in the drama; for Scotus of course being honoured with the personal frendship of the whole hundred and sixty inceptive candidates, he had first to receive a copy from each, with the "author's compliments," his "sincere esteem," his "affectionate respects," tortured, in short, into every form of phrase which affection or affectation could possibly invent. The trouble of presentation might have been borne, but, *horresco referens*, to read them all was really a serious undertaking, which however I got through, praising the author of one for the happiness of his motto, another for his excellent research, a third for the purity of his latinity, and so on with the rest, but invariably summing up the criticism, by stating that the one under consideration was the very best thesis which appeared this session; and in this I cannot accuse myself, however paradoxical the assertion may seem, of violating truth, for a jury of Bentleys or Scaligers could not decide between their respective merits. One thesis, indeed, there was, which deserves to be pointed out as an exception to the latter observation, on account of the spirit and sarcastic humour displayed by the writer in the selection of a motto. It was an essay composed, if I recollect rightly, on the anatomy of the eye, and dedicated, I presume, by permission, to Mr. Dick Martin, the animal philanthropist, by his witty and accomplished cousin, Mr. Martin Forsyth. While other aspirants after classical celebrity were draining Horace to the dregs for a new quotation, or enlisted Drs. Hawley and Milligan in that laudable pursuit, Mr. Martin Forsyth's "eye" saw its object at a cheaper price in the pages of the Latin Grammar, and by the alchemy peculiar to genius, which ennobles the humblest themes, compounded from this simple source, and with the assistance of an extract from John Bee's dictionary of fashionable literature, vulgarly called slang, the following elegant macaronic distich, which I copy verbatim from the title page of Mr. Martin Forsyth's dissertation on the eye:—

"Nom. hic occulus, gen. hujus occuli, dat. huic occulo,"
"And its all in my 'Eye,' Betty Martin, O!"

Unfortunately, universities have been as often the persecutors, as the patrons of juvenile genius; and this spark of Hibernian wit would most certainly have kindled the flame of vengeance against the classical scoffer at the dignity of the faculty of medicine, if, at the time the offence had been detected, his degree had not been already engrossed on a ten pound stamp, which was rather too much to throw away on the chastisement of a mortal pun.

Having read and impartially criticised the theses for their respective authors, I was the better prepared for attending to the next act of the representation, the ceremony of "impugning," a relic still preserved from the wreck of monastic education. The occurrence sent me back in imagination, to the times when the luminaries of the "dark ages" contended with each other in Latin for the length of a day; and when the day, too short for the determination of the contest, was prolonged by adjournment into weeks and even months of dubious disputation—when to decide how many angels might dance a strathspey on the point of a needle, was deemed the sublimest investigation which could occupy the human mind, and the most urgent incentive to the display of scholastic eloquence—when logical prize-fighters, armed at all points with the Aristotelian philosophy, perambulated the earth like the knights of chivalry, in search of rhetorical adventure, and challenging whole universities to the field of learned contention—when a Buchanan and a Creichton astonished the nations by their omniscience and extemporaneous effusions, or a Lope de Vega could improvise an epic poem before dinner—when, in short, kings whiled away their leisure hours, by witnessing the deadly conflicts of these logical desperadoes, who maimed each other after the most scientific system of argumentative attack and defence, as the Roman emperors amused themselves with the battles of wild beasts in the amphitheatres of Rome. I did not

expect to see the custom of public disputation followed up to so alarming an extent, or producing any mortal consequences to the parties, in these "piping times of peace;" but I could not have supposed, that where so much of the form had been preserved, that the spirit had entirely evaporated. I had not been long a spectator of the scene, when I was convinced how much the balance of decorum and ingenuity was in favour of the modern art of scholastic warfare, and how much more suitable the gay pageant of a review must have been to the feelings and capacities of the belligerents before me, than the barbarous combats and fierce ratiocination of ancient times, when disputants died of defeat. Nothing indeed could be more unlike the physiognomical preliminaries of a contest, than the composed features of the parties, the professors having entered adorned in their sweetest smiles, which were returned by the glances of their opponents on the benches, as peaceful and conciliatory. The venerable chieftain, Dr. Duncan, senior, supported on his right by Dr. Graham, and on the left by Dr. Allison, opened the day by challenging a gay spruce cavalier opposite to him, to account for a certain passage in his thesis; but the martial call being scarcely audible beyond the space that separated them, the youthful respondent hesitated, doubted, and after a moment of hurried reflection, concentrated his classical energies, and returned the assault in the profound enunciation of an "imo domine." The aged warrior "of a hundred battles" sunk back in his chair, satisfied with the response; while Dr. Graham, next bending the bow of Ulysses, rose and winged another interrogatory at the head of another opponent, which was parried by a similar answer. Thus question and answer chased each other down for many hours, the contest eliciting nothing in the shape of a reply more learned than a "certe" or an "imo;" or of approbation stronger, than the measured applause of a "recte dixisti." Deeply impressed with admiration at a display of concentrated phrase, which Lycurgus himself, in his deepest rage of condensing the conversation of his Spartans into monosyllables, might in vain attempt to rival; and a simplicity of colloquial fluency, which set the powers of old Corderius at defiance, I departed from the scene to ponder on the glories of to-morrow, a day which was to determine the fate of so many of his Majesty's subjects, without the last sad consolation of a coroner's inquest. Refreshed by genial slumbers after their arduous labours of the preceding day, the multitude poured into the chemical theatre at an early hour from the hundred vomitaries of the medical barracks of Lothian-street. I wish, for the satisfaction of my readers, that I could here convert my pen into a graver, to give them a more accurate idea of the assemblage by a diagrammatic etching, than can be communicated by words alone. At the bottom of this vast amphitheatre, however, which extends from the ceiling to the floor, and, raised on a platform, sat the seven professors of medicine, forming a sort of arch, with the very Rev. Principal Baird in the centre, who certainly made a most substantial key-stone. On the next half dozen of benches opposite, were arranged the candidates for the "cap;" and above them, again, to the very last row, a miscellaneous multitude of both sexes, the ladies' white plumes, green veils, and leghorns, giving a sublime undulatory motion to the living mass. The seven wise men of Greece could scarcely have looked more grave and demure than the seven Professors, though I fancied I could now and then discover, through the assumed placidity of their countenance, as they threw up an occasional sly glance at the dense array of inceptive graduates, something of that secret satisfaction with which the husbandman beholds, after his toils, his hill side waving with a luxuriant harvest. The very Rev. Principal Baird undoubtedly became his exalted place, being obviously formed for the centre of any assembly in which he might be cast; his ample rotundity and solid expanse of face and feature, proclaimed him at once the patriarch of a crowd, which seemed but an emanation from the exuberance of his person; and had I not known him to have been a meek and humble follower of the austere discipline of Knox, I would be inclined to have set him down for the corpulent possessor of a substantial bishopric, being manifestly intended by Nature for an episcopalian. The hilarity of the candidates added of course to the harmonious expression of the general picture, save and except where one of them, who had been celebrating the festivity of the times overnight at a graduation supper, now and then marred the universal gaiety of the scene, by a deep yawn for a bottle of ginger beer or soda water; and, to say the truth, I never saw the baillie's daughters look to more advantage, between whom and Dr. Hope, I thought I could perceive some stronger feeling to have existed than the mere sympathy excited by a distant recognition. The sentimental communication between them, of whatever character it might have been, was now interrupted by the very Rev. Principal, who rose and repeated with a solemn emphasis, and in a deep tone of voice, a beautiful paraphrase in Latin on the Lord's Prayer, in which every one present appeared to me to have most devoutly joined, except Dr. Hope, who, standing out of the line of his conjutors, fixed his eyes

on the speaker with a degree of stern intensity, as if he would look through his very soul. Various explanations of this phenomenon presented themselves to my mind at the moment, such as the ladies, the clergyman, matrimony, all which coincidences might at the time have struck on the imagination of the professor of chemistry; but no, all these surmises were wrong, he was only awaiting the final amen, which was the signal for him to commence his Latin oration; and no sooner was the orison concluded, than the learned professor, with an aristocratic stride, advanced to the desk, threw open his manuscript, and wheeling round with more than wonted pomposity, bowed, and addressed the Principal and the audience. Being considered the most accomplished classical scholar of the medical faculty of the University, his discourse naturally excited much attention. Its style certainly evinced a familiar acquaintance with the idiomatic peculiarities of Sallust, and the patavinities of Livy; but it is not so easy to decide on the merit of its matter, for it is difficult to determine what should constitute the substance of those holiday orations, which seldom have any important object to give them an interest, or their authors sufficient genius to conceal by its creations, the general insanity of their themes. On this account it is, perhaps, that all our Hunterian, Harveian, Croonian, and the Lord knows what orations besides, are almost invariably failures. Dr. Hope's sagacity, at least, taught him the folly of encountering these difficulties; and instead of aspiring to the perfection of genius, and labouring with a sterile subject, he very prudently took himself for his model, and made up his discourse by translating passages from his introductory and concluding address to the course of chemistry, with a few scraps, perhaps, from Dr. Duncan's late papers on medical education. The University, as every body knows, is a legitimate object of praise; it was accordingly applauded. The profession of medicine is, and ought to be, a very respectable way of keeping body and soul together; its dignity was, of course, asserted and inculcated. Its practitioners should be extremely studious and careful of the lives of their patients: they were very properly exhorted to incessant application, and admonished particularly not to poison any one by the grammatical inaccuracies of their prescriptions. But among these most profound sentiments of the composition, the one which seemed to have affected Dr. Duncan, junior, most sensibly, was that in which the speaker, with an emphasis suitable to the sublime thought, announced that there were no less than one hundred and sixty candidates present to receive the degree of doctor of medicine. Joy for a moment made his features the seat of its revels; an involuntary spasm of self-satisfaction contracted his shoulders into a cunning shrug; his hand instinctively rose to his brow, as if to shade the intensity of the emotion from view; but the expression of triumph as suddenly subsided into a melancholy smile; the feeling passed sympathetically to his colleagues; and to the generality of the spectators, the whole seemed as if the unwelcome thought had crossed their minds, that the hour of the tide's rising to its greatest height must be also that of the commencement of its ebb.

Their anticipations, whether of good or evil, were soon disturbed by other business. Dr. Hope having concluded one half of his oration to the manifest pleasure of the fair patronesses of the University, Dr. Duncan, junior, rose and read aloud the oath of fidelity to the graduates, calling on each to hold up his right hand, and to advance severally to the platform for the registry of their vows by the subscription of their names, which he repeated as each passed on before the Rev. Principal, to receive from his hands the final act in the process, the imposition of the velvet cap on their heads. Deeply interesting as this part of the ceremony must have been, exhibiting as it did the affecting rite of Medicine receiving the consummation of its powers at the hands of Religion, its frequent repetition might, perhaps, have made it seem tedious, had not, fortunately, its solemn monotony been relieved by the episode of an Irish fantasia. After calling over a variety of names, Dr. Duncan, junior, redoubled his nearly exhausted vocal powers, and, in a tone of voice prophetic of some extraordinary event, ejaculated, "PATRICIUS MURPHY," from the very depths of his chest. The announcement of the patronymic of Ireland, acted like a shock of electricity on the nerves of the audience; and all eyes were instantly strained to the point from whence the nominal representative of the "Emerald Isle" was expected. Mr. Paddy Murphy from *Mullanahone*, in his own dear county of *Kark*, was'nt *nun* jiffey *shure* enough in making his appearance on the stage, embodying in the confusion of his movements the aboriginal wildness of his features, and the devil-may-care eccentricity of his costume, the moral and political distraction of his native land. Habited in a lawyer's gown, (a judge's, I should suppose, from its capacious folds,) which hung in disorder from one of his shoulders for some yards behind him, and a three-bottomed horse-hair wig (another loan from the bench, I presume,) turned a little to one side from its centre of gravity, and shedding a plentiful shower of levigated chalk down his back at every motion, Mr. Patrick Murphy, whose primeval features pro-

claimed him an indisputable descendant of the Celtiberian colony of Kerry, rushed across the platform with a *faigha ballach* defiance of gait, turning all etiquette and Scotland out of his heels in the rapidity of his boisterous transit. Dr. Duncan stared—Dr. Graham was all but petrified—Dr. Allison endeavoured to look serious—the Rev. Principal, as the personification of Ireland, strode by him, receded in deferential awe—Dr. Monro, awakened from a profound sleep, rubbed his eyes, and wondered what it was all about—the ladies cast an imploring look for protection, against the incursion of the *Earish* Caliban, down to their friend Dr. Hope, who, with a desperate presence of mind, caught the fugitive by the skirts, and amidst a peal of laughter from the whole spectators, brought him back to have the velvet cap approximated to the wig, when, with another plunge, its possessor buried its honours among the crowd.

With the exception of the adventure of the wig, for which we were indebted to the jocose advice of some of Mr. Murphy's countrymen, to revive the ancient costume on the occasion, the remainder of the ceremony passed off without any occurrence of sufficient importance to deserve observation. The rest of the candidates were, on the restoration of order, doctorated; Dr. Hope concluded his oration in a murmur of applause; the Rev. Principal dissolved the vast concourse, who were never to meet again, in the words of peace and benediction; the late pupils, proud of their new honours, and the professors contented with their profits, congratulated each other in a heartfelt round of shaking hands on their mutual feelings and possessions; I stood silent and alone to contemplate the phases of an interesting scene in the drama of life; and as the thought of the diversified destinies of so many youthful friends who were on the point of parting, and never to be re-united on this side the grave, crossed my mind, Mr. Murphy and his wig vanished from my imagination, and I felt for the moment half inclined to be serious. In this state of sentimental neutrality, I was descending into the court-yard of the University, when my musings were dissipated by the appearance of some ill-looking fellows, their faces gnarled into so many fac-similies of a "subpœna," and obviously some low retainers of the law. They skulked in the adjacent piazzas and corridors, with an assumed, but suspicious air of indifference; and were accompanied by a scattered retinue of swindled tailors, bilked shoemakers, defrauded genteel widows dressed in black, the proprietresses of lodging-houses, and what smote me to the heart, a few pretty little victims of the Lotharios of Lothian-street, all watching their prey, e'er the evening mails bore them away for ever from their grasp. For the snippers of broad cloth and calf-skin I had little compassion, and they may measure their loss on their next customers.

It is now, perhaps, too late to tack a moral to my tale—to remedy a defect of design, which should, in the process of its execution, have gradually developed its object; and if there were not inquisitive beings in the world, who might demand the *cui bono* of the preceding narrative, I should be tempted to let it pass on, with the hope that the candid, at least, might discover its true import, without troubling them with unnecessary help of an explanation. The simple answer to such a question then is, should it be proposed, that the ceremonies described, no longer preserving their original spirit, or fulfilling the ends for which they were instituted, are now useless, expensive, and of an immoral tendency. The practice of exacting theses, which are seldom composed by their nominal authors, merely subjects students to the unnecessary trouble of first purchasing the manuscripts, and next, of paying for the printing of documents, a moiety of which is ultimately consumed in Dr. Hope's furnace. The most devoted admirers of antiquated usages, must admit the folly of "impugning" compositions which have never been written by the respondents; but the extreme absurdity of such a proceeding must be still more obvious when it is known, that while the mock solemnity of an examination is going forward, the degrees of the examinates are actually in the hands of the college scriviner. To complete these inconsistencies, and to comply with these inoperative institutes, pupils are detained three months in Edinburgh after the termination of the session, during which period, being set free from all restraint, they commit more excesses, and incur more expenses, than during the entire six preceding months of their studies.

SCOTUS.

Edinburgh, Oct. 27, 1827.

WESTMINSTER MEDICAL SOCIETY.

Saturday, Nov. 3.

DR. SOMERVILLE in the Chair.

THE President informed the Society, that he had, during the week, received a communication from Mr. Lambert, who, owing to a severe domestic calamity, was prevented from having the honour of reading his paper on the diseases of the testicle that evening,

but that Dr. Gregory, with his usual anxiety for their welfare, had very handsomely, and at a short notice, undertaken to offer a few observations on the subject of malaria.

Dr. Gregory rose to state, that the remarks which he was going to make, were intended rather to have the effect of eliciting information on this interesting subject, than to convey to the Society any novel opinions. He would commence with the doctrines of Hippocrates, though he by no means intended to follow those of every author since the time of the Father of Physic. Hippocrates was aware that fevers of different kinds could be produced by certain states and changes of the atmosphere, which were principally the variations from dryness to moisture, and from heat to cold; but he seemed to have had no definite knowledge of the propagation of fever from certain terrestrial effluviæ, which have been denominated malaria. Lancisi, who flourished at Rome about the year 1700, was the first who had distinctly pointed out the influence of malaria. Dr. Fergusson, of Windsor, in a paper published in the Edinburgh Medical and Surgical Journal, had taken very extensive and ingenious views of the subject. He (Dr. Gregory) considered malaria to be of two kinds, that which arose from the decomposition of vegetable matters, or, in other words, terrestrial effluviæ, and which gave origin to intermittent fevers, and that which was derived from animal exhalation, and which produced continued fever. He did not mean to assert, that continued fever could never arise from marsh miasmata, for he had known one or two instances, but the statement which he had just made was in general the correct one. Dr. M'Culloch was the person who had made the greatest inroad on the propriety of this doctrine. Of late, malaria had been supposed to give origin to many other diseases besides fever, thus dysentery, cholera, and even goitre itself, had been ascribed to its influence, but these were merely the silly opinions of the day. One great object in his rising, was to direct the attention of the Society to the treatment of intermittent fever, to inquire how far the use of bark had been beneficial, and what were the comparative powers of the sulphate of quinine. He had within the last few days had an opportunity of visiting a large manufactory of sulphate of quinine, on Snow-hill, and from which, during the last eight months, London had received its principal supply of that drug. He wished to find out from any of the members, how far it differed from the French, which, previous to this time, had been generally used in this country. It was a curious circumstance, that the species of bark, which formerly was supposed to have the greatest powers in curing intermittent fever, affords only a very minute quantity of the salt.

Dr. Johnson expected, when Dr. Gregory rose, that he would have afforded them some information concerning the composition and action of malaria, instead of entering on its history. He rather thought, from what he recollected, that Dr. Gregory was wrong, in supposing Hippocrates to be ignorant of the existence of malaria; but as he had not looked *into him* for a considerable time, although he had *him* lying about him, he could not be certain. But the bad effects of malaria were well known long before the time of Lancisi. Dr. M'Culloch had quoted a passage from Pliny, in which that author had recommended those of the Romans who had country seats in the vicinity of marshy grounds, to sell them to those who did not know their bad qualities. The original views on this subject, which Dr. Gregory ascribed to Dr. Fergusson, were not justly to be attributed to him, but on the contrary, to Dr. Hibbert.

Dr. A. T. Thomson spoke at considerable length as to the impropriety of employing the term "malaria," which conveyed the meaning, that a chemical change existed in the composition of the atmosphere, when the nicest chemist had been unable to detect any variation. He thought, that without a certain state of the constitution, malaria could not exert a pernicious effect, and related to the Society the case of Dr. Gregory, the author of the "Physician's Guide," and the father of the late celebrated professor in Edinburgh, who, when a student in a part of Germany where malaria prevailed, and who, from being a philosopher, and living low, drinking only water, was seized with intermittent fever, when his jolly companions, who ate and drank freely, escaped. He thought that there was a great connexion between the state of moisture and the production of malaria, and was of opinion, that the occurrence of rheumatism, from damp, which, in nine cases out of ten, assumes an intermittent form, corroborated his views.

Dr. Milligan could not see any connexion between malaria and moisture. It was well known that intermittent fever did not prevail when the Nile had overflowed its banks and the neighbouring country, but after it had begun to recede. He related some curious facts which had come under his observation in the Mauritius, where persons living at the summit of a high rock, near which no malaria existed, had become affected with intermittent fever. It had been supposed that malaria had been carried from India by the currents of the atmosphere. In some cases he had found the powder of bark to be more effectual in the

cure of intermittent fever, than the sulphate of quinine.

Dr. Webster could not agree with Dr. Thomson in the statement which he had made as to the connexion between the state of moisture and the existence of malaria. He had lived a long time in Rome, had crossed the Pontine marshes several times, and had himself been affected with intermittent fever, and consequently had paid a vast deal of attention to the subject. After he had crossed the Pontine marshes two or three times without being affected with intermittent fever, he thought that his constitution was callous to their influence, and on his last visit he had incautiously fallen asleep. He was immediately attacked with the disease in a severe form. Intermittent fever prevailed most in Italy during the months of August and September, at a season when not a drop of rain fell, and when scarcely a cloud was visible for weeks before, so that it was impossible to conceive malaria to have any connexion with the state of moisture. He considered malaria to operate by causing debility. This opinion was corroborated by the fact, that if brandy or other stimulants were taken previous to exposure to it, intermittent fever was generally prevented.

Dr. Thomson explained, that he did not mean to state that intermittent fever arose from moisture, or that malaria and that stage of the atmosphere were similar, and he attempted to show in what they differed, but we were altogether unable to comprehend his views. He had seen the manufactory alluded to by Dr. Gregory, and he could bear testimony to the truth of what he had stated concerning it. He thought that a similar establishment in South America would turn out to any enterprising individual a profitable concern.

Dr. Johnson could not conceive that any change, or a particular state, of the atmosphere could produce intermittent fever. He had been in a fleet which contained forty thousand men, and which was moored near the banks of the Scheldt, close to an army, the soldiers of which were dying in thousands, and yet, though the sailors were absolutely so near that they could speak to those on shore, not one of them was attacked with the disease. A similar occurrence had taken place in Batavia.

Dr. Shiel was astonished that no one had mentioned the work of Dr. Clark on this subject. He had lately had an opportunity of visiting Professor Tommasini, who had informed him, that he found the powder of bark to be much more efficacious than any of its preparations.—After some desultory remarks from Dr. Barry, and after it was announced from the Chair that the latter gentleman would at the next meeting read a paper on the subject of "Internal Aneurism," the Society adjourned.

LONDON MEDICAL SOCIETY.

Monday, November 5.

Dr. Haslam in the Chair.

Dr. Shearman commenced the discussion this evening, by inquiring of the members of the Society, the result of their experience with the use of ammoniacal injections in cases of suppressed menstruation.

Mr. Iliff related the particulars of a case at present under his care: the patient, a girl 16 years of age, has never menstruated; she has had, for several months, severe pain in the head and back, and once a month, with these symptoms much increased, she has also bleeding from the nose. The girl being of a plethoric habit, Mr. Iliff has thought proper to abstract blood, by opening a vein in the foot: he wished to learn if this were a case in which ammoniacal injections should be used?

Mr. Waller objected to the use of ammoniacal injections, believing that suppression of the menses was seldom dependent on the state of the uterus alone, but was rather attributable to constitutional causes, to which it was consequently necessary to direct attention. Mr. Waller then read a paper on a peculiar state of excessive nervous irritability, occurring in the puerperal state. Mr. Waller defined the disease as consisting in a highly *excited*, or rather *excitable* state of the brain and nervous system. The patient complains of constant uneasiness in the head, seldom amounting to violent pain; if left to herself she wanders, but can readily be roused, so as to give rational answers. In one of the best marked cases which Mr. Waller has met with, the patient complained of a feeling of constriction within the head, and all the senses except that of touch were painfully acute, There is uniformly great heat about the scalp, but the face and eyes have not the turgid appearance seen in the more acute affections of the brain: the countenance is anxious, but pale; the tongue moist, slightly discoloured, and having a creamy appearance; the surface of the body is often moist, the pulse is hurried, beating from 120 to 130 in a minute, and readily excited under mental agitation. If the patient falls into a sleep, she is not refreshed, but wakes with frightful and harassing dreams. In the first case which occurred to Mr. Waller, he was

(to use his own expression) "puzzled;" he treated it with purgatives, and the case ended fatally. In the second case, at which Dr. Blundell attended in consultation, antiphlogistic measures were had recourse to in a moderate degree; but under this treatment the patient evidently got worse, and upon being called to her one night, Mr. Waller found her with a feeble pulse of 124 in a minute, with a pallid countenance, subsultus of the muscles of the lower extremities, and a quivering of the muscles of the face; in fact, the patient had a moribund appearance. It being evident that she was sinking, although the action of the heart and arteries had increased, it occurred to Mr. Waller, that if he could by any means lower the action without lowering the power, or in other words, lessen the frequency without diminishing the force of the circulation, the desired object would be obtained. With this view it was determined, with the concurrence of Dr. Blundell, to put the patient fully and completely under the influence of opium; *three grains* were given every hour, for six hours, and the effect was most striking: the pulse lost its irritable character, becoming full and round, and falling to 92. In the evening, another dose of opium was given, and a sudorific draught, consisting of liq. ammon. acet. and mist. camph. ordered to be taken every four hours. The patient slept all night, and nearly the whole of the following day, and from that period had no relapse.

Mr. Waller further stated, that he had since seen many cases of a similar nature, which he had successfully treated by the exhibition of opium. In addition to this he remarked, that it is useful to apply an evaporating lotion to the head; that great caution was necessary in acting upon the bowels, for as they partake of the general irritability, the symptoms are much aggravated if the patient be purged. Hence the necessity of distinguishing this irritability from that produced by an accumulation of fæces in the bowels; in the latter affection, there is more decided pain in the head; the tongue is much discoloured and loaded; there is also generally a little pain experienced if firm pressure be made on the abdomen, and the skin has not that soft and yielding feel which it has in the former affection.

Mr. Procter wished to know, why Mr. Waller called this a peculiar affection of the brain. In the puerperal state, there was always a tendency to irritation about the head; and the symptoms which Mr. Waller had enumerated, were not uncommon after the loss of large quantities of blood. He, Mr. Proctor, was also at a loss to know what ill effects could result in these cases from the bowels being acted upon.

Mr. Waller replied, that his first patient was freely purged, and she sunk soon afterwards; and that in the second case, only two tea-spoonfuls of castor-oil were given, and they acted violently. He considered purging but a secondary consideration.

Mr. Langstaff inquired, whether the brain had been examined after death, in any of Mr. Waller's cases, to which Mr. Waller replied in the affirmative, stating, that in the first case which he had said proved fatal, the vessels of the brain were turgid, and there was slight effusion in the ventricles. Mr. Langstaff wished to learn if the uterus had been examined, as he knew that inflammation of this organ, and the formation of matter in the veins, would occasion severe cerebral symptoms.

Mr. Waller rejoined, that nothing morbid was detected in the uterus; in one case it seemed paler than natural. To an inquiry, whether the train of symptoms described, was invariably consecutive to the great loss of the blood, Mr. Waller replied in the negative. No further discussion took place on this subject, but Mr. Iliff's case was reverted to, and some comments made upon the practice of bleeding from the foot, to which Mr. Iliff pleaded "usuage and ancient custom."

Mr. Procter made some judicious remarks on the two opposite states of the system, in cases of suppressed menstruation, the one being benefited by tonics, the other by blood-letting.

A long, rambling, and exceedingly tiresome debate now ensued, on the use of sulphate of zinc, administered internally in cases of gleet; and upon this disease generally, Mr. Callaway, Dr. Williams, Mr. Lloyd, and several other members, took a part in the debate, but nothing particularly worthy of record was elicited.

[It gives us much pain to observe, that some proceedings took place in the course of the evening, which are at variance with every proper feeling of decorum, and if repeated, will necessarily bring contempt on the Society. The debating-room of a Medical Society is not exactly the place for *Bacchanalian* pranks. Dr. Haslam's situation as Chairman was exceedingly painful, but we scarcely need say, that he discharged his duty with the urbanity of a gentleman, although compelled, in his official capacity, to notice proceedings, at once disorderly and disgraceful.]

The following particulars of Mr. Iliff's interesting case of paraplegia, were omitted in our report of Oct. 13th:—Page 57, tenth line from the top of second column, after cathartic mixture, &c. *read*, "2. P.M. A little improved with respect to mental dis-

tress; pulse 80, character natural; bowels not yet acted upon. Mr. Callaway thought the sensibility of the lower extremities rather improved. 10. P.M. Pulse 80; skin nearly of its natural temperature; no headach; countenance much like health. When the catheter was introduced, about a teaspoonful of muco-purulent fluid first passed through it; the urine after, was but slightly clouded; has had a slight watery stool; flatus has been frequently expelled, and the tension of the abdomen, (which had in the morning been more than usual) was certainly less; the ammonia was discontinued."

Monday 10. Has passed a very restless night, principally referrible to the domestic arrangements not being quite to his satisfaction. On my visit, I found he had had a little sleep since his breakfast, and was much refreshed by it. He has had a slight headach during the night, but now is free from it; skin moist; pulse good; tongue moist; and had urine dribble from him; and upon an effort being made, several drops passed out of the urethra. Bowels not yet acted upon; two spots observable on the hip, assuming rather an unpleasant character; the urine contained about two tablespoonfuls of thick muco-purulent matter; ordered a colocynth clyster to be given him."

It ought then to read, "4. P.M." instead of "September 18th, 4. P.M." After the words, "the right hip showing a disposition to slough," it should read, "Tuesday 11th, 10. A.M. Has had at intervals about four hours sleep during night; the urine has dribbled away in such quantities, that upon introducing the catheter, only a small quantity of thick viscid fluid, of a sanious character, escaped. The bowels had acted during the night; and according to the nurse's statement, a very fair faeculent stool had involuntarily passed away; pulse about 80; countenance quiet; skin moist; a slight disposition to hiccup; he had vomited the black dose, and wished for a Sedlitz powder, which was allowed him. Half past 10. P.M. The bladder had become emptied by the gradual dribbling of the urine; had felt oppressed with flatus, which produced something like hiccup; and a little of the sp. ætheris comp. was given him, which afforded relief; has taken beef-tea several times in the course of the day; bowels not opened since the morning; countenance rather more anxious; the pupil readily contracted upon the approach of a candle; pulse 94; point of tongue rather dry; wished for another Sedlitz powder, which was allowed, and some sp. æth. c. tr. hyoscyami, &c. ordered to be given him in the night, should the spasmodic affection return; the spots on the hips rather improved in appearance; he stated his inclination to sleep to be considerable, but yet felt doubtful if he should get rest; less consciousness of his distressing situation has existed, than I think naturally might have been expected; this I have generally found unfavourable."

In the same report, for "*Mr. Winder*," read "Mr. WINSTONE."

SMALL POX.

To the Editor of THE LANCET.

SIR,—I have been pleased to observe your readiness upon all occasions to reprobate any mean or dishonourable conduct in the members of the medical profession, and that your efforts have been uniformly directed to render the practice of it more worthy a liberal and enlightened age. But I am led more particularly to these remarks by the gratification I felt in reading your just censures in THE LANCET of the 14th of July last, on the conduct of an individual who has been endeavouring to keep alive, by inoculation, that bane of society, small pox. You will, I doubt not, feel equally indignant to learn that two surgeons have been adopting the same wanton practice in the town of ——, and have thus been the means, through subsequent contagion, of depriving several of their fellow-beings of life! These men, not having families or relations around them, are lost to all the tender ties which children impart, and which make the anxious parent dread the approach of so direful a disease. As no casual case of small pox had occurred in the town for many months, I believe I may say for years, they could not have had the plea for introducing it to prevent its spreading in the natural way; no: their motives were of a more selfish character; actuated by pecuniary considerations, regardless of consequences!—One of these men too, not content with the paltry gains which that town would afford him, carried the scourge to a neighbouring village, till the timely interference of several intelligent inhabitants of that place prevented the farther operation of his disgraceful object. I will leave you to judge of the character of this self-appointed surgeon, by his suffering a poor man to remain six days with strangulated hernia, and then packed him off to a hospital, where he was operated on, and died the following day.

I remain, Sir,

Your constant reader and well-wisher,

VERAX.

November 1, 1827.

THE LANCET.

London, Saturday, November 10, 1827.

THE scarcity of subjects in the various anatomical schools of this metropolis, is matter of deep regret, both with teachers and with students. Even at the enormous prices now demanded by the resurrection-men, an exceedingly small supply only can be obtained. In many instances the teachers themselves pay double as much as they charge the students, whilst, in other schools, the pupils have to discharge the full amount of the sum demanded. Lecturers and students being thus circumstanced, the cultivation of the science of anatomy is lamentably retarded; and if those who are desirous of becoming acquainted with this single foundation of medical knowledge, are to be opposed and worried by so many obstacles and annoyances, it would not be surprising if they altogether abandon the pursuit. All the grievances of which the profession and the public have so much cause to complain, relative to this and a vast number of other evils connected with medical matters, may be traced to the supineness, imbecility, illiberality, or dishonesty, of the rulers of our precious College. Without having taken a single step to procure for our dissecting-rooms a legal supply of bodies, they have enacted a "regulation," which compels the student, before he can obtain an examination, to produce a "certificate" of having attended lectures on anatomy, and of having performed two or more courses of dissections *in London*; and even a certificate of *two years* attendance on the surgical practice of the largest provincial hospital of the kingdom, is not received by the worthy court of examiners, unless accompanied with a certificate of the candidate having attended *two courses* of lectures on anatomy, and accomplished two courses of dissections *in London* PREVIOUSLY to the commencement of such attendance on provincial hospital practice. We have already shown on several occasions, that this regulation amounts to a PROSCRIPTION of certificates from the surgeons of country hospitals, a fact of itself sufficient to show the hardihood and injustice of those who framed such a "regulation:" but when it is recollected, that its authors not only attempted to compel pupils to attend lectures and dissections in London, and positively refused to receive certificates of attendance on the lectures and practice of provincial surgeons *on any* conditions; —when it is further recollected, that these regulation-makers, at least seven or eight of the dirty TEN, were themselves *London Hospital surgeons*, and the remainder participating in the fees paid to those hospitals; —when it is further recollected, that at the very moment this regulation was adopted, no subjects could be procured for dissection in London, and that the *nominal* surgeons of our hospitals were not, for the greater part superior in scientific attainments to as many old apple-women;—when it is further recollected, that at the time of passing this regulation, no clinical lectures were delivered in the London Hospitals, no books of cases kept, no notices of operations posted, no post mortem examinations publicly made, and the pupils treated with as much contempt as a herd of swine;—when it is further recollected, that several of the notorious TEN, were, at the very time of framing this regulation, employed in bartering the rights of others, to secure a tainted income to themselves and relatives, were engaged in projecting plots and "bonds," to secure the most profitable places in the *London shop* of SURGERY, to their cousins, godsons, nephews, and "infant anatomists;"—in a word, when it is recollected, that the mercenary TEN endeavoured by this "regulation," to compel the whole of the English surgical students to purchase their professional knowledge at *one shop*—a shop stored with

nothing but tinsel and *dummies*, and *that* shop their own: we can find no language sufficiently strong to express our indignation—detestation, of such profligate baseness and injustice. Neither can we adequately express our sorrow at beholding such individuals still at the head of affairs, in an institution which, from its peculiar local advantages, would probably, if honourably and liberally governed, confer greater benefit on the country, and on mankind in general, than any other of a similar nature in the known world. As well might a wrecked mariner appeal for deliverance to the huge and unsightly whale, as the members of the medical profession, to that dark abode of ignorance, prejudice, and avarice, the College of Surgeons, at the present crisis. No measure of relief, or even a show of assistance, can be expected from that quarter. Judging from past circumstances, if the College move at all, there can be little doubt that the weight of its influence will be thrown into the scale of the enemies of liberality and reform. Indeed, it cannot be concealed, that a great proportion of the difficulties the profession has to contend against have emanated from the blundering manufactory in Lincoln's Inn Fields. Laying avarice aside, would any, but the most stupid dolts, have hit upon the notable expedient of compelling people to make their purchases at *one shop*, with a view to afford them a better and cheaper supply of the materials to be purchased. Do these wiseacres believe, that if the people of England were compelled to purchase all their mutton at Weyhill, or all their wheat at Salisbury, that they would get a more liberal supply, or that either would be better? Do they imagine that the people would be further benefited, if the breeders of the sheep were compelled to produce "certificates," that the animals had eaten no grass except that of *Wiltshire*, and if the owners of the wheat were compelled to produce "certificates" of its having been grown exclusively on the soil of *Hampshire*? Yet this absurd and monstrous prohibitory principle has the College endeavoured to enforce in the field of science, and to an extent not a fraction less preposterous than in the instances here adduced. In one case the merchant, acting under a dread of the penalties of a vile prohibitory law, would say, "Truly your wheat is remarkably plump, full, and weighty, it is just the thing I want, and I deem the price moderate; of course you have a 'certificate' that it was grown in Hampshire?" "I can furnish you with no such document," replies the farmer, "because it is the produce of another county; surely it matters not where it was grown, you see that the quality is excellent, and I can sell it to you at a much cheaper rate than my neighbours of Hampshire, because I pay less rent for the land, and less wages to the labourer." "Very true," replies the merchant, "but I am compelled by a peculiar law of my company to purchase *Hampshire* wheat, and although yours may be better and cheaper, yet the company would not 'recognise' it as 'sound' without a 'certificate.'" Just so with the gentry of Lincoln's Inn Fields, they "recognise" no knowledge unless purchased, and at a pretty dear rate too, at one of *their shops*; they must and will have the "certificate;" without it the most brilliant attainments are rejected with contumely, and the industrious and accomplished student is spurned from the portals of their temple. It is useless for the astonished pupil to declare that he has dissected during five or six seasons in Paris; that he had at all times a plentiful supply of subjects in that capital; that they cost him only from three to six francs each; that he went to Paris because he could procure *no subjects in London*, and that when he left the dissecting rooms here, they were empty. In reply, he hears of nothing from *nine* of the TEN but "Certificate! Certificate!" muttered with sullen and cold-blooded avarice, whilst the tenth ejaculates "*The bond, the*

hood,—must take care of the INFANT ANATOMIST!" Can such an iniquitous system as this continue? It cannot; and the moment the Legislature becomes fully acquainted with its disgraceful workings, a single act of the United Parliament will blast it for ever.

The conduct of the College towards Mr BENNETT, one of its own Members, is a foul stain upon its character, which years of virtuous deeds cannot efface. Mr. Bennett, a British subject, lectured in Paris to a numerous class of English students, was amply supplied with subjects, and a teacher of acknowledged excellence, yet the "sound chirurgicals," the generous and disinterested legislators of our College, not only refused to "recognise" the "certificates" of Mr. BENNETT, but interfered with Mr. Canning, who at that time was Foreign Secretary, to prevent the English Embassador at Paris from affording protection to Mr. Bennett's school, when threatened by the French authorities, in consequence of some disturbance that had taken place between the French and English students. Consequently, Mr. Bennett* was obliged to quit Paris, and that gentleman's present residence in London, is the only occurrence within our knowledge, that is directly or indirectly calculated to benefit the profession, of which this Institution has been the cause. From this statement, it is evident that no effectual remedy can be found in Lincoln's Inn Fields, for any professional disease. The members of the College must keep their eyes steadily directed to a more respectable, to a more influential quarter, to persons who have not only the power, but the inclination to afford redress,—who have no temptation to act otherwise than uprightly, because their interests are not opposed to those of the profession, or of the public at large. We entertain little doubt, that the present CHARTER will be abrogated during the ensuing session of Parliament, and that the rights of the members will be placed on an enlarged and more liberal basis. Meanwhile, the members of the College, and medical students, should not remain insensible to the advantages they might derive from an early application to the Legislature, for the removal of obstacles and disabilities over which the College has no *legal* control, and the most grievous of which is, the difficulty of procuring subjects for dissection; or if procured, the penal risks under which they are obtained. On former occasions we have stated, that upwards of a thousand bodies for the dissecting-rooms might be obtained annually in London and its environs, without eliciting an expression of disapprobation from a single individual, at a cost of from four to eight shillings each. We repeat that statement. To secure this ample supply of subjects, it is only necessary to obtain an Act of Parliament for the removal of all *unclaimed* bodies to a general receiving house, from the hospitals, and other public institutions. From this receiving house, which of course ought to be kept at the expense of the schools, the subjects could be supplied to the different classes, in proportion to their numbers;

* On this gentleman's arrival in London, we were unacquainted with his merits, and the cruel treatment he had experienced from the College. A suggestion was, at that time, thrown out by Dr. Armstrong, that the profession should make Mr. Bennett's case their own, and try the question with the College in one of our courts of law; we deemed this an exceedingly hazardous experiment, as it was reducing the grievances of all the members of the College to an individual case, and our claims to redress, would thus have been thrown on the shoulders of one person, and that person a stranger, of whose merits or demerits the majority of the profession, like ourselves, were altogether unacquainted; accordingly, we spoke of Mr. Bennett as an "exotic," and warned the profession against the adoption of the proposed measure. We deem this explanation due to Mr. Bennett, because it has been imagined that it conveyed an intentional slight of his attainments—we entertained no such object.

and the Legislature requiring, under the infliction of a penalty in case of non-compliance, that all the parts of each body, not retained as specimens of anatomy, morbid or natural, should be interred according to the usual formalities and rites of the church. At the same time, the governors of the Royal Hospitals, and other public institutions, should be interdicted from exacting "bonds" from the relatives of patients, as security for burial in case of death; a practice, were it not for the existence of which, scores of bodies might be annually consigned to the dissecting-room, without creating a murmur. We throw out these suggestions for the consideration of the members of the College, as well as for medical students, who, indeed, are the most deeply interested; and we feel firmly persuaded, that if a petition, founded on the principle of these propositions, numerously signed by practitioners and pupils, were to be presented to the legislature, praying for such an act, that it would be obtained without difficulty, and probably without opposition.

If some alteration of the existing laws be not speedily effected, human dissections must be abandoned, as few medical men will be found sufficiently bold to hazard the consequences of exposure. Mr. Cooke, of whose persecution we have so repeatedly spoken,* has been compelled to leave Exeter, owing to the ignorant prejudices of its inhabitants; and within these few days we have seen in the Liverpool Advertiser, that Mr. Gill, a highly intelligent surgeon of that place, has been held to bail in heavy sureties, in consequence of a dead body, partly dissected, having been found on his premises.

* A letter from this gentleman to the subscribers will appear in our next.

THE YELLOW JOURNAL.

The approach of winter has exerted a sensibly depressing effect, even on the frigid compositions of "The Yellow," which we really believed had already sunk to the lowest degree in the scale of the literary thermometer. One case alone, which, from being certainly of an unprecedented kind, and from having called forth, in a wonderful manner, the *romantic* imagination of an Earle, demands, at our hands, a little consideration, and has saved the whole from that silent contempt and pity, with which, however painful to the generous mind, we should have regarded the weak, though convulsive efforts of the servile "Yellow," in its dying agonies. Often as it has been our duty to review the sickly pages of this jaundiced Journal, we never felt more inclined, than on the present melancholy occasion, to stretch out to it the hand of mercy, since it appears to be fast nearing that bourn, when it will be entitled to claim exemption from all critical remarks, and shield itself under the law,

De mortuis nil nisi bonum.

First in the ranks of "The Yellow" appears Dr. Gregory, with an "original paper" on "Constitutional Inaptitude to Cow-pox;" i. e. he has given very ancient and common place opinions and doctrines, under the barbarous title "Constitutional Inaptitude," which hath the important signification, that in certain constitutions, even although the poor victim be punctured and lacerated in different places, yet the inoculation may not be effected; and that even should vesicles form, they may die away, without producing the wished-for result. This "inaptitude" the Doctor conceives may be either temporary, or it may last for life; novel opinions, certainly; and which, as they agree with the experience of all old wives, who have existed previously to the time of our author, may now be received as established facts!

Dr. Gregory, among his other *great discoveries*, informs us that, during the existence of certain forms of disease, and particularly inflammations of the mucous membranes, the matter will not take effect, and, in proof of this *original* statement, he has had the good luck to meet with a family of South Sea Islanders, whose cases are, doubtless, calculated to make a very great impression on the profession. Should the Doctor continue his train of original reasoning and induction, he has, we think, a fair chance of turning out a second Jenner, and of being as expert in the discovery of "constitutional inaptitude" as of himself, in all medical societies, and places of public resort.

Voluminous as have been the works on the subject of hernia, the number of "singular varieties" and "extraordinary" operations which have been divulged during the present year, prove them to be eminently defective. To supply this important desideratum, the efforts of "The Yellow" have been unremittingly directed, and, accordingly, the present Number contains a case with some *speculations*, calculated to show the *propriety* of laying open the intestinal tube in cases of enteritis, in like manner, as it proved in a former Number, by the recital of the celebrated case of Ann Magan, the necessity of performing the Cæsarian section for prolapsus ani!

These two new operations have been founded on different views of the anatomical structure of the abdomen, and hence with much justice have been denominated Brodie's and Earle's *plans* of cutting for rupture. Their success, however, has been equal, and no signs of the herniæ now exist, unless it be in the occasional appearance of two unearthly visitants, with their bowels hanging down to their knees, who are to be observed at the hour of midnight, perambulating the scene of their mortal sufferings.

Our readers, in the previous Number of THE LANCET, will find a full and accurate detail of the last extraordinary operation, which in "The Yellow" is wrapped up in as much nonsense and flummery as a blunderer ever invented to conceal the wanderings of his judgment. We shall, however, take the statements of Mr. Earle himself, and even with them we shall have little difficulty of convicting him of unwarrantable and unscientific proceedings.

The propriety of Mr. Earle's cutting through the integuments of the hernial tumour, no one who considers the symptoms, would, we think, call in question; but when he discovered his error, and that no portion of the gut was strangulated, his reasons for slitting it up, which are couched in the most ambiguous and wretched language, are in the highest degree futile and absurb. After stating that the gut was much *thickened*, but not inflamed, he proceeds:—

"This circumstance, coupled with the foreign body which was felt within the cæcum, led me to suppose that a portion of small intestine had been protruded through the valve of the colon, forming a case of introsusception within the hernia. With a view to further reduce the tension of the tumour, I punctured the gut with a small trocar, and drew off a small quantity of dirty-coloured fluid and flatus; still the great bulk of the swelling remained but little diminished."

With the view, therefore, merely of reducing the tumour, and after, too, he had come to the conclusion that an introsusception existed, he conceived himself justified in running a trocar into the patient's colon! The next judicious step which he took was the following:—

"An incision of an inch and a half long was made through the gut: the coats were greatly thickened, but not inflamed. On cutting through the peritoneal and muscular coats, the mucous coat protruded through the incision to a large extent. On opening this, and introducing my finger, I was able to trace the continuity of the gut upwards through the ring, in the course of the ascending colon. The cavity of the tumour was filled with numerous folds of thickened mucous membrane, to which I could not find any opening, except at one spot where a circular opening could be felt, but so small

as to lead me to suppose it to be the entrance to the processus vermiformis."

We have, we confess, heard of surgeons laying open the abdomen with the view of extending the gut in cases of introsusception, but Mr. Earle is the first who has actually slit open the colon with that view. Why, we ask, did he not first attempt to stretch the gut before he cut it open? If an introsusception did exist, would not that operation have answered? And if no disease of the kind was present, which really was the fact, where was the necessity of laying open the colon, and thus wilfully establishing an artificial anus, one of the most disgusting maladies with which human nature can be affected?

But Mr. Earle mistook the case altogether, for it turned out to be, as the dissection afterwards proved, inflammation and thickening of the mucous membrane, which gave rise to the feeling of "the firm elastic body distinguished in the cavity of the sac." After these *tremendous* proceedings, the reader will hardly be surprised to find, that the poor patient was put to bed in the following awful condition:—

"The patient was now so much exhausted, and the case presented so hopeless an aspect, that I did not consider it right to persevere in any attempts to restore the introsuscepted gut. He was accordingly removed to bed, with a large mass of intestine exposed, having an opening at the lower part, through which some flatus passed. His pulse was exceedingly feeble, countenance pallid, and his extremities cold."

On this case of enteritis, complicated with an old hernial tumour, Mr. Earle, with a surpassing degree of humility, "ventures to offer the following explanation:"—

"The valve of the colon was much prolonged into the cavity of the cœcum, and its aperture was diminished in consequence of the thickening of its parietes. The cœcum and colon were so much extended in consequence of their firm attachments to the diseased cellular membrane and its great volume, that the natural cavity of these scera was nearly obliterated; the under surface of the bowel being pressed up, so as greatly to diminish the calibre of the gut, and to keep the thickened mucous surfaces nearly in contact. Such being the state of the gut, a very little increased pressure would be sufficient to compress the sides of the elongated valve together, and to form a complete stoppage to the passage of the contents of the small intestines."

And of the operation he thus speaks:—

"The urgent symptoms of strangulation which existed when the patient was admitted into the hospital, and his repeated declaration that it had suddenly increased in volume during the exertion of sneezing and coughing, imperiously called for an operation. Having commenced it, and exposed a large surface of intestine, and not having found any recently protruded portion, or any sufficient cause to explain the nature of the constipation, it became necessary to investigate more narrowly that portion which was exposed, and this led to the supposition of an introsusception through the valve of the colon; a supposition which was strengthened by the examination after the opening had been made, and which was not wholly disproved by the complete exposure of the parts after death."

Such are the particulars of the new "singular variety of hernia," the discovery of which will entitle Mr. Earle to a wreath of laurel from Jemmy Johnson, not less thick than that with which he surrounded the brows of Brodie, for slitting up Ann Magan's abdomen, in a case of prolapsus ani, and entitle him to a place on the page of history, next only to the *glandular* Jeffries!

Mr. Charles Mayo, of Norwich, has related a case of a tumour, situated over the parietal bone, in which he tied the common carotid artery for its cure. Editor Roderick, with considerable generalship, has placed the account of this immediately previous to Mr. Earle's case, in order that the reader might be led on, step by step, from one useless operation to another. Perhaps the best account of this tumour, is contained in the detail of the dissection:—

"On trying to raise the right anterior and middle lobes from the basis, I found the brain adherent to the dura mater, &c.: when peeled off, the pia mater and substance of

the brain appeared to have been absorbed by the pressure of the tumour, which now presented itself, passing through the squamous portion of the temporal and lower part of the parietal bones, and occupying the temporal fossa of the sphenoid bone within the cranium, but closely covered by the dura mater: some small hard tubercles projected from its surface. The bulk of the tumour, projecting externally, equalled in size the two closed fists, extending upon the os frontis and backwards to the occipital bone, pushing the ear downwards, forwards, and outwards, to a considerable extent: the whole mass I should think weighed more then two pounds; it did not appear to have any particular connexion with the parotid gland, but extended to the glenoid cavity, and penetrated into the sphenc maxillary sinus, and into the cells of the e' amoid and sphenoid bones, opening into the nose, which accounts for the occasional epistaxis to which the patient had latterly been subject. The zygomatic process was in a great measure absorbed. On slicing off the external part of the tumour, it appeared to be of a uniform consistence, and much firmer than at an earlier period of its growth, so that it might now perhaps be more properly compared to the pancreatic sarcoma than the medullary."

In a late very liberal, sound, and gentleman-like speech, delivered by President Mayo at the Westminster Society, he had the excellent taste, the great good judgment, to designate an operation of Mr. Wardrop's, in which that gentleman tied the carotid artery for aneurism of its temporal branches, a *gratuitous* one. We are at a loss to conceive, what term he would find sufficiently hard to apply to this, where, in truth, there was not the least use for the hazardous operation; but perhaps his jealousy and ire would be considerably modified by the circumstance, that when the patient died, the "nece spicimin" was sent to the Windmill Street shop, where, at the next annual sale, it will, doubtless, fetch a very handsome price.

From the manner in which Mr. North relates a case of catalepsy, an ignorant person might be tempted to believe, that such a thing did not occur more than once in a century. The features of the disease were the following:—

"In consequence of the removal of the patient to the house of a friend who resided in my neighbourhood, I was sent for to see her on the 30th of March. My attendance was requested as speedily as possible, as she was supposed to be in a dying state. I found her in bed, and apparently in a profound sleep. She had just fallen into this state after a violent fit of hysterics. Not the slightest motion could be observed in any part of her body. No pulsation at the wrist could be felt. The action of the heart was so extremely feeble, that it was distingushed with difficulty; and no motion whatever could either be seen or felt in the carotids. The pupil of each eye was contracted to a very minute point. The temperature of the body was below its natural degree. A glass was held before her mouth, but no vapour could be detected on its surface. Her respiration was not perceptible, for the chest appeared as perfectly free from motion as the other parts of the body. Various stimuli had been applied without effect. I remained with her about an hour, and perceived that she drew a deep but gentle inspiration about every ten minutes, and that there was an occasional slight trembling motion of the eyelids."

Besides these "originals," we must not omit to mention Mr. Andrews' common place case of retention of urine, and some observations of Mr. Guthrie, showing the good effects of the chloruret of lime in purulent disease of the conjunctiva, otherwise the labours of these great pathologists would, in all probability, never come before the public eye, but be for ever concealed among the ruins of "The Yellow."

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HOSPITAL OF SURGERY,

Panton Square, St. James's.

CASE OF ENORMOUS OVARIAN TUMOUR.—INTERESTING POST MORTEM EXAMINATION.

Mary ———, Oct. 20, of a scrofulous, delicate habit of body. In the beginning of January last, after having been copiously bled for a supposed aneurism of the heart, she first perceived a small hard tumour in the left groin, which was attended with no pain, and indeed scarcely attracted her attention. This however gradually increased in size, and as it became larger, produced severe pains, extending through the pelvic cavity. In June, it had attained a very considerable size, and produced a swelling of the abdomen, apparent to every observer. Her general health became affected, she lost flesh and strength, and had œdema pedum.—At this period she consulted Mr. Wardrop, who, as she did not wish to become a patient in the hospital, has visited her occasionally with her medical attendant, Mr. Blackstone, of Camdentown, till the period of her death. Notwithstanding the employment of every means usual in such complaints, the tumour gradually and rapidly increased. She was, latterly, attacked several times with inflammation of the peritoneum, which rendered the abstraction of blood necessary. This, however, had the unavoidable effect of greatly reducing her strength; and, two months ago, a collection of fluid had taken place in the abdomen.—From this accumulation of disease, and worn out by the repeated attacks of peritoneal inflammation, she at length died on the 24th of October.

Dissection.—On laying the abdomen freely open, a tumour was seen occupying the whole cavity of the pelvis and part of the abdomen, extending from the sacrum to above the umbilicus, and completely filling up the intermediate space. This tumour, whose surface was covered by a serous envelope, was considerably broader above than below. Its superior surface was uneven, but not ulcerated, and was studded with several large formations resembling hydatids in an inspissated state, while at its base there projected an ulcerated mass, exactly resembling cineritious matter, and having the appearance of fungus hæmatodes.

At the lower and anterior part, the swelling adhered strongly to the broad ligament of the uterus, and to the Fallopian tube—but not a vestige of the left ovary remained. At other points, it had no attachments, except where it was in contact with the sacral vertebræ.—The uterus was small and sound, although containing a quantity of a viscid glairy fluid.—The right ovary was slightly enlarged and very much indurated, but had no connexion with the tumour. In the peritoneum, reflected over the uterus and bladder, there was a great congeries of large tubercular bodies, in various stages of development, but none of them, in this situation, had the appearance of hydatids, such as have been described as existing at the superior margin of the foreign mass.

On cutting through the tumour, it was found to be composed of various structures: inferiorly, of soft cineritious matter, contained in large cells; in the centre of a substance resembling blood; superiorly, of a harder fleshy structure, intersected with thick cellular membrane; and around its margin, it was formed of a green matter, resembling lymph.—Besides this general appearance, on more minute examination there were observable many small cysts, containing a curdy matter, interspersed throughout the whole mass. On cutting out this enormous tumour, it was found to be 31 inches in circumference.

By prosecuting the dissection, the pancreas was discovered to be greatly enlarged, and converted into a substance resembling in appearance the ovarian tumour, while a vast number of the mesenteric glands were increased in size, and composed of soft cineritious materials.

The peritoneum at several parts was of a deep black colour, and the omentum was evidently in a melanotic condition, containing in its structure, a black matter which could be easily washed away. The mucous membrane of the vagina, uterus and intestines was slightly vascular.

The occurence of hydatids and tubercles in different stages in the same diseased structure as happened in this tumour, is one of rather a rare occurrence. It appears to be highly confirmatory of the opinions advanced by Baron and Jenner, as to the origin and development of tubercles.

CASE OF PERINEAL FISTULA.

The subsequent case exhibits a striking instance of the bad effects of the too frequent employment of bougies for the cure of stricture of the urethra, particularly when the mucous membrane is in an inflamed state.

B. B., ætat. 40. The greater portion of his perinæum is in a very diseased state, being much inflamed, thickened, and indurated, with several extensive sinuses, which discharge a large quantity of purulent matter, running in every direction. He complains of difficulty and frequency of micturition. The urine is discharged in a very small stream from the urethra, a large quan-

tity of it passing by one of the openings in the perinæum, and occasionally, particularly after intoxication, scarcely a drop flows from the natural outlet. He suffers also from a distressing sense of heat and scalding of the urethra, from which there is a continual and copious discharge of pus. His complaints are attended at times with considerable constitutional derangement, and the discharge of urine from the false openings is productive of much uneasiness, as well as inconvenience to him. He states that he has been repeatedly affected with gonorrhœa, and has used a variety of astringent injections. Five years ago he experienced a great difficulty in passing his urine, and at this time he applied to a surgeon, who discovered a stricture, and used the bougie. But being unable to attend him, he fabricated for himself an instrument, composed of whalebone and covered with leather, which he introduced into the urethra every second night, and used considerable force in passing it through what he considered to be the constriction. After these attempts, there was invariably a great discharge of blood, and he experienced for a considerable time afterwards a severe degree of pain. Notwithstanding these bad consequences, he continued the use of the whalebone instrument for some weeks, when he was attacked by a violent inflammation in the perinæum, which was speedily followed by the formation of abscesses, and on the discharge of these, the urinary fistulæ, which now exist, were established.

On his admission a bougie was passed down, to ascertain the state of the urethra, a contraction was felt about an inch anterior to the bulb, but not such as to obstruct to any extent the discharge of the urine.

The treatment adopted, has been to diminish as much as possible the over-excited mucous membrane of the urethra, and to allay the inflammation of the perinæum. With this view, general and local bloodletting have been freely employed, and the introduction of any instrument has of course been altogether avoided.

ST. THOMAS'S HOSPITAL.

CASE OF RUPTURE OF THE INTESTINE.

W. Hart, 15 years of age, was admitted into Isaac's Ward on the 31st of October, about noon, and placed under the care of Mr. Green, on account of severe injury to the abdomen. It appeared that the accident had occurred from the boy's falling off the mast of a ship into the hold, where he struck against some ballast, or, as it was subsequently said, fell with his body across a bar of iron.

When admitted into the hospital, there was excessive pain in the abdomen, and tenderness upon pressure, especially on each side of the navel; the pulse was small and quick, the countenance was particularly marked with an anxious expression; the lips were pallid, and surface of the body cold.—Warmth having been applied, in the course of two hours considerable reaction had taken place, and, in consequence, blood was abstracted from the arm to the amount of twelve ounces: during the blood-letting the patient vomited a considerable quantity of a greenish fluid. In the course of the afternoon and evening he vomited several times, but upon the whole appeared to be somewhat better. He partook of some milk, and also of some tea.

November 1st.—*Noon.* The patient has passed an exceedingly restless night; the pulse is small, sharp, and almost innumerably rapid; the countenance is indicative of distress in a most remarkable degree; there is great pain in the belly, and exquisite tenderness on pressure, with occasional vomiting. The breathing is performed with great difficulty, and it is singular in its kind; the inspirations are very short and rapid, and the chest in consequence is not fully dilated. The diaphragm is almost motionless, so that as it does not pass downward in the usual manner, and propel the abdominal contents, the pain in these parts is not aggravated. Mr. Tyrrell directed thirty leeches to be applied to the abdomen, with the subsequent use of fomentations; *three grains of calomel*, with *one third of a grain of opium*, to be given every four hours, and a colocynth enema to be administered immediately.

These measures were adopted, and the enema acted slightly, but the patient gradually got worse, and died between three and four o'clock in the afternoon, about twenty-eight hours after his admission into the hospital. He was perfectly sensible throughout the whole time, although suffering the greatest possible agony, and he said very emphatically on more than one occasion, "I am sure my paunch is broken."—The body was inspected, and evidences were found of the most intense inflammation having prevailed throughout the whole of the abdomen; the different convolutions of the intestines were agglutinated by lymph, and the peritoneum of the parietes was in a like degree covered with lymph. However, the grand source of mischief was found at the commencement of the jejunum, in which there was an opening of about the size of a shilling; but it is a curious and important fact that the wounded intestine had become adherent to the omentum, at the seat of injury, so that nature had evidently commenced a repara-

tive process, and this probably within a few hours after the receipt of the injury, when general peritoneal inflammation was set up, and proved rapidly destructive.

ST. BARTHOLOMEW'S HOSPITAL.

POLYPOUS GROWTH FROM THE UTERUS.

We give this case as fairly characteristic of the degree of difficulty that now and then occurs, in deciding between inversion of the uterus, and polypous growth from the cervix of that organ.

S. S., æt. 48, was sent from the country by a medical gentleman, from the supposition that she had inversion of the uterus, and recommended to the care of Mr. Stanley. The history obtained from her was as follows: after the delivery of her last child, there was a perpetual discharge from the vagina; this, at first, was leucorrhœal, but it gradually degenerated into a bloody sanies. For several weeks she was treated for common leucorrhœa. No advantage resulting therefrom, an examination, per vaginam, was proposed. This was assented to, and the medical attendant discovered what he supposed to be inversion of the uterus; whereupon, she was sent to town with a recommendation to the care of Mr. Stanley. She procured lodgings, we believe, somewhere in Clerkenwell, and became Mr. Stanley's patient. He hardly knew what to make of the case, and requested Mr. Birch to see it, in conjunction with him. That gentleman frankly acknowledged that, at first, it puzzled him. The tumour was *sensitive*, and occasioned much pain when rudely handled. Polypous growths generally are *insensible*. He inquired minutely into the *quantity* and *character* of the discharge, from time to time. It had gradually increased from the commencement, and, at present, was considerable. Its appearance had altered from the common leucorrhœal discharge, to the resemblance of blood. This inclined him to the belief of its being polypus, but the *sensitiveness* of the tumour made him hesitate in giving such an opinion. By main force, (quite as much as was warrantable,) Mr. Birch succeeded in carrying his finger to the top of the vagina. At first, the polypus and uterus appeared to be in a continuous and even surface, but ultimately the finger entered a small crevice, which enabled him to feel the edge of the os tincæ. This was conclusive. It was a polypus, having an attachment to nearly the whole circumference of the os tincæ. Mr. Birch at once decided, that its removal would be the only available remedy. This getting to the ears of the landlady, her only anxiety was to bundle out the poor woman as quickly as possible. No operation being practicable under such circumstances, she was sent by Mr. Stanley to St. Bartholomew's Hospital, and intrusted to the care of Mr. Earle. This gentleman was rather doubtful as to the nature of the case. He consulted with Mr. Birch respecting it, and the latter gentleman gave it as his decided opinion, that it was no other than a polypous growth from the uterus, and that its removal was imperiously called for. Mr. Earle, we know not why, did not seem to heed this good advice. She continued for days in the Hospital, without *anything* being done. The drainage from the system was so great, that her life was placed in imminent danger. About two in the morning, on the 6th, the house-surgeon, Mr. Warry, was called to her. She was apparently dying. The polypus had descended to the os externum. Conceiving that he should effect what ought to have been done days ago, Mr. Warry immediately passed a ligature around the neck of the polypus, and detached it with a scalpel. Eighty minims of laudanum were administered in a little warm wine, a few minutes after. In the course of an hour she rallied, but continued excessively debilitated for several days, though she ultimately recovered.

This woman unquestionably owes the preservation of her life to the decision of the house-surgeon, Mr. Warry.

CASE OF SUPPOSED HERNIA AT GUY'S.

To the Editor of The Lancet.

Sir,—Having in the last week's Number of The Lancet read an account of an operation in a case of supposed femoral hernia by Mr. Key, I will venture to make one remark which I think you will not, in justice to the operator, object to publish. It is evident that your reporter had not arrived in the theatre till after Mr. Key had given his opinion, which, as it tends to place the whole in a widely different point of view from that in which it has been represented, should be made known to your readers. It was to the following effect.—That from the account of the tumour given by the patient he had been induced to think it to be a case of femoral hernia, but that since the man had been brought into the theatre, and placed upon the table, he was disposed to alter his opinion, and to consider the nature of the case as very doubtful, "*at all events*," he said, "*it is not a well marked case.*"

Knowing it to be your wish at all times to give to the professional public correct and impartial statements, I offer no apology for troubling you, but remain, Sir,

Your obedient servant,

Spectator.

GUY'S HOSPITAL.

WOUND OF THE ULNAR ARTERY NEAR TO THE WRIST,

Treated by the application of ONE *Ligature only, above the Wound.*

W. L., a shoemaker, about thirty years of age, and of spare habit, came to the surgery on Tuesday morning, Sept. 18. He stated that on the preceding Thursday evening, he accidentally inflicted a severe wound in his wrist, by means of a sharp knife which he employs in his business; there was very profuse bleeding immediately succeeding the injury, and he went to a *surgeon*, who *simply* applied some lint and strips of adhesive plaster. From the time of the accident to the date of his application at the Hospital, a period of four days, profuse hæmorrhage repeatedly occurred, but the *soi-disant* surgeon, to whom he applied in the first instance, contented himself with "binding it up."!! The poor fellow, however, becoming much exhausted by the repeated bleedings, sought relief at the Hospital. On examination there was found to be an oblique wound of about half an inch in length, over the site of the ulnar artery, and immediately above the wrist. As it was evident enough from the situation of the wound and the patient's account of repeated hæmorrhages, (the blood being very florid, and jetting out,) that the ulnar artery was wounded—the dresser, a "fit and capable" man, enlarged the wound and *attempted* to tie the artery, but being somewhat dubious as to the parts, either not being able to discover the artery or not being capable of distinguishing between the artery and the nerve, *wisely* deferred the operation until the arrival of Mr. Key, and a tourniquet was put round the patient's upper arm in the interval. Shortly afterwards Mr. Key visited the patient, and, after considerable delay, succeeded in *applying one ligature only to the artery, above the point at which the vessel was wounded*, by which the bleeding was completely restrained; the wound was closed with strips of adhesive plaster, and the patient directed to keep his bed with the arm elevated and the hand in a state of pronation.

There was nothing important to remark in the daily progress of the case, except that the wound was tedious in healing; on the 18th of October, when this report was made, it had not completely cicatrised; the ligature came away on the seventh day.

This case has excited considerable interest and discussion at the Hospital from time to time, principally in reference to the *peculiar* mode of practice adopted by Mr. Key, in the application of *one ligature only* to the wounded artery.

ST. THOMAS'S HOSPITAL.

WOUND OF THE RADIAL ARTERY NEAR TO THE WRIST,

Treated by the Application of a Ligature above and below the Wound, and division of the Artery in the Interspace.

J. F., 21 years of age, was admitted into Abraham's Ward, on the 29th of October, under the care of Mr. Green, on account of hæmorrhage from a wound in the forearm, near to the wrist. The account given was that he had been employed five days previously in washing bottles, when one of them broke in his hand and occasioned a wound at the wrist, which bled very copiously. He applied at the surgery, and was seen by Mr. Travers' dresser, Mr. Ward, who informs us that he found a transverse wound of about an inch in length, over the situation of the radial artery: the bleeding was readily restrained by means of the application of a dossil of lint, and strips of adhesive plaster. On the evening of the same day, it appears the man again came to the hospital, stating that the wound had bled considerably: his expression was, that the blood "spurted out," it was checked before he visited the hospital; and when he applied there was not the slightest bleeding. However it was deemed right by Mr. Ward to remove the dressings, and examine the part with a view of detecting the wounded artery, which from the patient's description of the "spurting out" of the blood was naturally suspected to exist; but no bleeding vessel was discovered.

On his admission, the man came to the surgery to have the wound dressed. On removing the dressings a gush of blood ensued, evidently of an arterial kind; and the nature of the case now being fully apparent, the man was ordered to a ward, and a compress applied to the part until the arrival of Mr. Green. The edges of the wound were partially adherent, and a pulsatory tumour of about the size of a marble had formed at the seat of injury: the pulsations were very apparent: the hand was swollen and tender, as were also the wrist and the forearm to some extent. Mr. Green, having first applied a tourniquet to the upper arm, laid bare the radial artery, which he found punctured; he passed two ligatures beneath the artery, one above and the other below the wound, and divided the vessel in the interspace. There was very little blood lost in the performance of the operation—the wound was closed with strips of adhesive plaster, and the patient put to bed with his hand placed prone, raised upon a pillow, and rags, wet with cold lotion, applied. On the fourth day the dressings

were removed, and the wound was found to be in a healthy condition: the swelling of the hand and arm had subsided. On the eighth day, when this report was concluded, the patient was in every respect doing well; the ligatures had not separated.

GUY'S HOSPITAL.

OPERATIONS.

The following operations were performed on Tuesday last: we place them in the order they occurred.

1. *Removal of a Cancerous Tumour, in a state of Ulceration, from the Mamma, by* Mr. Morgan.—The patient, in this case, is a woman of spare habit, about 50 years of age; she ceased to menstruate twelve months ago; had borne one child several years since, and suckled it, but not with the diseased breast. When admitted, which was about a week since, she was found to have an ulcer of the size of a crown-piece, situated on the outer side of the right mamma, immediately beneath the anterior fold of the axilla; it had broad, hard, and irregular edges, whilst its upper surface was covered with a brownish-coloured slough, closely adherent: it discharged a sanious, offensive matter. The skin, to some extent around the base of the ulcer, had a dark red or livid colour, and a considerable portion of the mammary gland around the sore, was very hard; there was no glandular enlargement in the axilla. The account given by the patient of the formation and progress of the disease, is this:—seven years ago she perceived a hard tumour, not larger than a pea, on the outer side of the breast, it went on gradually and slowly increasing, without being productive of any other inconvenience than occasional lancinating pain, until it attained the size of a walnut, when it remained stationary for some time. About two months before admission, it became very painful, and ulceration then commenced, which went on to the extent we have described.

The operation consisted in making two oblique elliptical incisions, so as to include the diseased mass; that is to say, a large portion of the adjacent mammary gland, as well as the part in a state of ulceration. A portion of the pectoral muscle was removed. The subclavian artery was compressed, according to Mr. Morgan's usual practice, and two vessels only were tied.

2. *Amputation of the Thigh, by* Mr. B. Cooper.—This operation was performed on a young woman labouring under extensive chronic disease of the knee joint. Two lateral flaps were formed of the muscles, by thrusting a knife through on each side of the bone, cutting downwards and outwards. We observed one fault in the subsequent part of the operation. When Mr. Cooper passed his knife around the bone, for the purpose of cutting through those parts not divided in making the flaps, the muscles not being properly held back, several cuts were made into them. We mention this apparently trivial circumstance, because it is certainly productive of increased pain to the patient, baffles the surgeon, and to say the least, has a slovenly appearance, when all this might readily be avoided, if the good old-fashioned retractor were resorted to. Nothing material occurred in the remainder of the operation; there was very free bleeding from the stump, and it was necessary to secure many vessels. The patient was much emaciated, so that the limb was very small, and the muscles, when cut into, had a pale flabby appearance.

3. *Lithotomy, by* Mr. Key.—The patient, a healthy man, ætat. 49, from the county of Northumberland, had been afflicted with the usual symptoms of stone about nine months, but had not suffered greatly. He had been in the hospital nearly a fortnight, and was prepared for the operation by the repeated exhibition of mild purgatives, so as to empty the bowels completely.

Mr. Key used his straight staff and knife as usual, and cut into the bladder with the greatest possible facility, but the operation was much delayed in the extraction of the calculus, which for a considerable length of time eluded the grasp of the forceps. The calculus was oval-shaped, flat, rough, and apparently composed of lithic acid; at least, its external part.

Mr. Key's acknowledged superior dexterity as a lithotomist, and as an operator with the knife and straight staff, may render the following statement of the result of his public practice interesting. Within five years, Mr. Key has operated upon thirty-two patients in this Hospital, for stone; and of this number has lost two cases only. In the one case, the patient was a boy, and suffered much constitutional irritation; on post mortem examination, almost the only thing observed of importance, was the presence of worms in the intestinal canal. With the second fatal case, a man, 50 years of age, there was inflammation and suppuration in the cellular tissue around the bladder, a form of disease succeeding the operation of lithotomy, which Mr. Key has the merit of having especially pointed out. In all the cases but one, Mr. Key has used the knife and straight staff—in one case he employed the gorget: the patients, as must of necessity occur in public practice, were indiscriminately taken, varying much, of course, in age as well as in condition. If, however, our memory serves us correctly, the greater number of Mr. Key's operations have been performed on young subjects.

CASE OF CANCER OF THE PENIS.—OPERATION BY MR. KEY.

John Aston, forty-seven years of age, a labouring man from the county of Worcester, was admitted into Job's Ward, under the care of Mr. Key, on the 22d of October.

The patient, a stout healthy-looking fellow, said that about fourteen months previous to admission a very small warty excrescense made its appearance on the upper part of the prepuce, which occasionally bled when irritated by his linen adhering. It went on gradually increasing, and at length extended completely round the fore-skin. He had always experienced much difficulty in retracting his prepuce, but after the appearance of the disease, phimosis was complete.

In the course of a few months, a purulent discharge issued from beneath the prepuce, and the penis, to some extent downwards, gradually became very hard; there was occasionally severe lancinating pains in the parts.

When admitted, the penis presented a very remarkable appearance; at the tip of the prepuce, (which we may observe was very long,) was a flat, button-like, fungous growth: in fact, we do not know that it can be better described than by supposing the prepuce to be drawn down and much elongated, then the lips of the prepuce turned out, and presenting a red fungous surface. The glans was completely hid, and on making pressure upon it, a quantity of purulent matter came from beneath the fore-skin, and pressing around the tip of the prepuce, sebaceous matter was seen issuing from numerous pores in the fungous surface. The prepuce being, as we have previously remarked, much drawn down, and the glans being much expanded behind, gave a curious bulbous appearance to the whole. The integuments of the penis, to about one-third of their extent downwards, were preternaturally hard. There was no glandular enlargement in either groin.

Mr. Key, fully satisfied as to the malignant nature of the disease, proposed an operation, to which the poor man assented, and it was accordingly performed on Tuesday, October 30th.

Operation.

Mr. Key first introduced a director beneath the upper part of the prepuce, and with a phimosis knife freely slit it up. This exposed the glans, and Mr. Key further laid it bare by turning back the fore-skin, now completely liberated, and not adherent to the glans.

This latter part was found to be less diseased than was previously supposed; the upper part, adjoining the corona, was studded with numerous small warty granulations, and the tip of the glans was affected in a similar manner. With respect to the fore-skin, it was found to be universally diseased, being completely covered, on its inside, with small hard granulations, similar to those affecting the glans. Mr. Key removed the diseased integuments, all round, performing circumcision, in fact, but going to some distance behind the glans, so as to include the whole of the hardened skin. The next step in the operation was to remove the diseased portions of the glans. In cutting away the upper part near to the corona, a large artery was divided, which was tied, and this, with the arteria dorsalis penis were the only vessels secured. A piece of lint dipped in spirit of turpentine was wrapped around the wounded parts, which had the effect of staunching the hæmorrhage; in addition to this, a broad tape was fastened moderately tight round the penis, by means of a running noose, and the patient was put to bed.

TO CORRESPONDENTS.

Communications have been received from the following Correspondents:—Dr. Noel—Mr. Williams—A Practitioner of Cork—Caballus—Mr. Lefevre—Messrs. Price and Gifford—Mr. Fixott—X.—A Veterinary Surgeon—Dr. C. M. Kind—Mr. Allison—Philippos—Peter Pry—Aristarchus—Dr. Negri—Charity—A. H.

The following papers have also reached us:—Observations on the Leeds Infirmary—Case exemplifying the Insufficiency of Midwives—A Memorial—A Letter to the Governors of the General Hospital, Nottingham.

The request of Messrs. Price and Gifford will not be forgotten.

It is feared that the suggestions of "A Cork Practitioner" are impracticable.

Did "X. O." get our letter?

It is impossible to comply with the request of "A Veterinary Surgeon."

The case of Mr. C. will be alluded to in our next Number, on which occasion we shall insert the letters of "A Pupil of the Westminster," "A Pupil of St. Bartholomew's," "Dr. Negri," and probably the valuable paper of "Dr. C. M. Kind."